

All About

# Servicing

2007-2009

Room Air Conditioners

**FRIGIDAIRE™**

**W** White-Westinghouse

**Gibson**

***Kelvinator*** 

***TAPPAN***

Electrolux Major Appliances; North America  
250 Bobby Jones Expwy  
Augusta, GA 30907



### Safe Servicing Practices

**Avoid personal injury and/or property damage by observing important Safe Servicing Practices. Following are some limited examples of safe practices:**

1. DO NOT attempt a product repair if you have any doubts as to your ability to complete the repair in a safe and satisfactory manner.
2. Always Use The Correct Replacement Parts as indicated in the parts documentation. Substitutions may defeat compliance with Safety Standards Set For Home Appliances.
3. Before servicing or moving an appliance:
  - Remove power cord from the electrical outlet, trip circuit breaker to the OFF position, or remove fuse.
4. Never interfere with the proper operation of any safety device.
5. Use ONLY REPLACEMENT PARTS CATALOGED FOR THIS APPLIANCE. Substitutions may defeat compliance with Safety Standards Set For Home Appliances.
6. GROUNDING: The standard color coding for safety ground wires is GREEN, or GREEN with YELLOW STRIPES. Ground leads are not to be used as current carrying conductors. It is EXTREMELY important that the service technician reestablish all safety grounds prior to completion of service. Failure to do so will create a hazard.
7. Prior to returning the product to service, ensure that:
  - All electrical connections are correct and secure.
  - All electrical leads are properly dressed and secured away from sharp edges, high-temperature components, and moving parts.
  - All non-insulated electrical terminals, connectors, heaters, etc. are adequately spaced away from all metal parts and panels.
  - All safety grounds (both internal and external) are correctly and securely connected.
  - All panels are properly and securely reassembled.

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## Section 1 Basic Information

This Manual has been prepared to provide Electrolux Service Personnel with Operation and Service Information for Frigidaire Room Air Conditioners.

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### **WARNING**

Room Air Conditioners manufactured after August 1st, 2004 are equipped with a new industry regulated power cord with either of the following in the plug-head or in line:

**LCDI:** Leakage Current Detection Interrupter

**AFCI:** Arc-Fault Circuit Interrupter.

All Frigidaire products have an LCDI located in the plug head or in-line.

### **WARNING**

This service manual is intended for use by persons having electrical and mechanical training and a level of knowledge of these subjects generally considered acceptable in the appliance repair trade. Electrolux home products cannot be responsible, nor assume any liability, for injury or damage of any kind arising from the use of this manual.

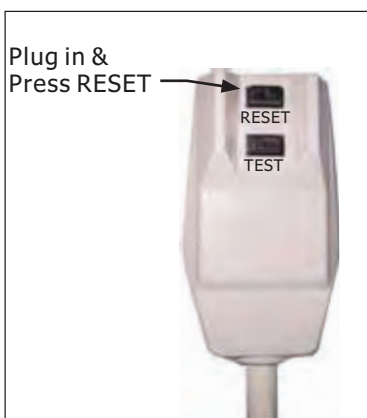
### **WARNING**

The power supply cord contains a current device that senses damage to the power cord. To test your power supply cord do the following:

1. Plug in the Air Conditioner.
2. The power supply cord will have TWO buttons on the plug head. Press the TEST button. You will notice a click as the RESET button pops out.
3. Press the RESET button. Again you will notice a click as the button engages.
4. The power supply cord is now supplying electricity to the unit. (On some products this is also indicated by a light on the plug head).

#### Notes

1. Do not use this device to turn the unit on or off.
2. Always make sure the RESET button is pushed in for correct operation.
3. The power supply cord must be replaced if it fails to reset when either the TEST button is pushed, or it cannot be reset. A new one can be obtained from the product manufacturer.
4. If power supply cord is damaged, it CANNOT be repaired, it MUST be replaced by one obtained from the product manufacturer.



NOTE: Some plugs have the buttons on the side.

## Section 1 Basic Information

Read all instructions before using this air conditioner.

### WARNING

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance. Read product labels for flammability and other warnings.

### WARNING

To reduce the risk of fire, electrical shock, or injury to persons when using your air conditioner, follow basic precautions, including the following:


1. Be sure the electrical service is adequate for the model you have chosen. This information can be found on the serial plate, which is located either on the side of the cabinet or behind the grille.
2. If the air conditioner is to be installed in a window, you will probably want to clean both sides of the glass first. If the window is a triple-track type with a screen panel included, remove the screen completely before installation.
3. Be sure the air conditioner has been securely and correctly installed according to the separate installation instructions provided with the unit.
4. Save this manual and the installation instructions for possible future use in removing or reinstalling this unit.

### WARNING

#### Electrical Information

The electrical rating of the room air conditioner is stated on the serial plate. Refer to the rating when checking the electrical requirements.

1. Be sure the air conditioner is properly grounded. To minimize shock and fire hazards, proper grounding is important. The power cord is equipped with a three-prong grounding plug for protection against shock hazards.
2. The air conditioner is to be used in a properly grounded wall receptacle. If the wall receptacle is to be used is not adequately grounded or protected by a time delay fuse or circuit breaker, have a qualified electrician install the proper receptacle.
3. Do not run air conditioner with outside protective cover in place. This could result in mechanical damage within the air conditioner.
4. When handling the air conditioner, be careful to avoid cuts from sharp metal fins on front and rear coils.
5. Do not use an extension cord or an adapter plug.

 **WARNING** Avoid fire hazard or electric shock. Do not use an extension cord or an adaptor plug. Do not remove any prong from the power cord.

Grounding type wall receptacle



Do not, under any circumstances, cut, remove, or bypass the grounding prong.

Power supply cord with 3-prong grounding plug and current detection device.

## Section 1 Basic Information

### MODELS

#### Mini

##### FAX Series

- 5,000 BTU cooling capacity
- Rotary fan control on base model
- Units with electronic controls including remote available
- Cools 150 sq. ft. rooms
- 2-way air direction control
- Slide-out filter access
- Pleated quick mount window kit included for easy installation.

#### Mini Compact

##### FAA Series

- 5,200 to 8,000 BTU cooling capacity
- Rotary fan 3-speed control on base models
- Units with full-function electronic controls available
- Some models have a full function remote control w/ remote thermostat
- Multi-Step fan speeds on electronic models
- Cools room sizes from 165 to 350 sq. ft.
- 8-way air direction control
- Tilt-out filter access
- Clean air ionizer available on some models
- ENERGY STAR® models available
- Pleated quick mount window kit included for easy installation.

#### Compact

##### FAC Series

- 10,000 to 12,000 BTU cooling capacity
- Rotary fan 3-speed control on base models
- Units with full-function electronic controls available
- Some models have a full function remote control w/ remote thermostat
- Multi-Step fan speeds on electronic models
- Cools room sizes from 500 to 640 sq. ft.
- 8-way air direction control
- Tilt-out filter access
- Clean air ionizer available on some models
- ENERGY STAR® models available
- Pleated quick mount window kit included for easy installation
- FAC109S1A available with environment friendly refrigerant R410A.

#### Through-The-Wall

##### FAH Series

- 8,000 to 14,000 BTU cooling capacity
- 4,200 to 10,600 BTU heating capacity available on select heat and cool models
- 3 fan speeds
- Units with full-function electronic controls available.
- Temperature sensing remote control with thermostat on select models
- Cools or heats room sizes from 350 to 640 sq. ft.
- 4-way air direction control
- Fits all existing wall sleeves. New wall sleeves available.
- Optional window mounting kit available
- Available in 115V or 230/208V
- ENERGY STAR® models available
- Universal trim kit covers space between the sleeve and unit.

#### Slider Casement / Slide Out

##### FAK Series & FAZ Series

- 8,000 to 12,000 BTU cooling capacity
- Some FAZ Series have heat and cooling capacity
- 3 fan speeds
- Units have full-function electronic controls with remote
- Cools room sizes from 350 to 640 sq. ft.
- 4-way air direction control
- Easy mount window kit
- Optional high window kit available
- 3 models available
- ENERGY STAR® model available.

## Section 1 Basic Information

### Median

#### FAM Series

- 15,100 to 18,500 BTU cooling capacity
- 16,000 BTU heating capacity available on select heat and cool models
- Rotary fan 3-speed control available on base model
- Units with full-function electronic controls available. Temperature sensing remote control with thermostat on select models
- Multi-Step fan speeds
- Cools room sizes from 900 to 1,170 sq. ft.
- Multi-directional air control
- Tilt-out filter access
- Clean air ionizer available
- 3 models available
- ENERGY STAR® models available
- Pleated quick mount window kit included for clean installation
- Slide-out chassis

### Heavy Duty

#### FAS Series

- 22,000 to 28,500 BTU cooling capacity
- 16,000 BTU heating capacity available on select heat and cool model
- Rotary fan 3-speed control available on base model
- Units with full-function electronic controls available. Temperature sensing remote control with thermostat on select models
- Multi-Step fan speeds
- Cools room sizes from 1,435 to 1,960 sq. ft.
- Multi-directional air control
- Tilt-out filter access
- Clean air ionizer available
- 4 models available
- ENERGY STAR® models available
- Pleated quick mount window kit included for clean installation
- Slide-out chassis

## Features & Benefits

### Electronic Controls

Set the room temperature at the preferred comfort level. Electronic controls and convenient temperature readout ensures the unit is set at the precise comfort level you require. All electronic models maintain the temperature to be within 2 degrees of the set temperature.

### Anti-Microbial Filter & Clean Air Purification

Enjoy a cool, comfortable room with air cleaned by a patented clean air anti-microbial filter, which reduces bacteria, odors and other particles. The clean air purification also improves air quality above standard filter methods resulting in relief for allergy and respiratory ailment sufferers. Look for models with the clean air ionizer for improved air filtration performance.

### Multi-Speed Fan

Cool down a room at the rate you decide. Auto Temp adjusts the fan speed up or down until the room reaches the desired temperature. A multi-speed fan allows you to choose from 3 speeds.

### Sleep Mode

Provides worry-free operation and energy savings while you sleep. 30 minutes after you set this mode, temperature increases two degrees. After 30 minutes more, it goes up another two, then holds for 7 hours before returning to the original temperature.

### Energy Saver

Energy Saver mode cycles the fan and compressor until the room temperature increases above the set temperature, then returns to normal operation until the set temperature in the room is again reached.

### Full Function Remote

The patented Temperature-Sensing Remote offers an added level of comfort and control by offering temperature monitoring by the remote control itself or at the air conditioner. Take room temperature up or down a notch, right from your favorite armchair. This convenient remote offers precise temperature selection from a distance. Look for models with Remote Thermostat that allow the unit to sense temperature where it is important, where you are at with the remote control.

## Section 1 Basic Information

### Accessories

#### Attractive Architectural Grille (EA109T)

Heavy-duty, heavy-gauge, anodized aluminum rear grille kit has easy indoor installation and can be ordered for all through-the-wall models.

#### Universal Large A/C Support Bracket (AC-160)

Supports standard 12,000 BTU - 24,000 BTU A/C units weighing up to 160 lbs. Provides window unit security and has easy indoor installation.

#### Universal Small A/C Support Bracket (AC-080)

Supports standard 5,000 BTU - 10,000 BTU A/C units weighing up to 80 lbs.

#### Universal Antimicrobial Cut-To-Fit Filter (5304437663)

Washable, reusable filter resists bacteria, mold and fungus growth, removes common particulates and lasts six times longer than standard foam filters

#### A/C Weather Seal (5304426311)

Foam compresses to seal window unit or sash, reducing vibration, outside noises, dust, insects, cold drafts in winter and warm air during summer.

#### Through-The-Wall Window Mounting Kit (EA102T)

Adapts Frigidaire® Through-The-Wall models for 28" to 41" wide, 17-1/2" minimum high windows. Specially treated quick-mount side panels resist UV-ray deterioration. Includes rear grille.

### Through The Wall Builder Sleeve

Through-The-Wall Builder Sleeve (EA108T) All-weather, galvanized steel with internal support for security. Includes a weather-tight seal, adjustable mounting brackets and aluminum rear grille.

Model	EA108T
Dimensions	
Cabinet Height	15-1/4"
Cabinet Width	25-1/2"
Cabinet Depth	17-1/2"
Carton Height	17-1/8"
Carton Width	27-1/6"
Carton Depth	18-8/9"
Unit Weight	25 Lbs.
Shipping Weight	30 Lbs.

Chassis	Model Prefix	Window Mount	Thru Wall Mounting	Thru-the-Wall Sleeve
Mini	FAX	Yes	No	No
Mini Compact	FAA	Yes	No	No
Compact	FAC	Yes	No	No
Slide-Out	FAZ	Yes	Note 2	No
Median	FAM	Yes	Note 2	No
Heavy Duty	FAS	Yes	Note 2	No
Sliders	FAK	Yes	Note 3	No
Thru the Walls (TTW)	FAH	Note 1	Note 4	Yes

### NOTE

Note 1: Requires optional window kit not included.

Note 2: Mounts in unit shell - Wall thickness limited - see Installation Instructions.

Note 3: Not intended to be wall mounted.

Note 4: Should be installed in TTW sleeve if wall mounted



## Section 1 Basic Information

### How to Choose a Room Air Conditioner

Compared to large capacity central units, room air conditioners have several advantages. The initial cost of a room air conditioning unit is significantly lower than the cost of central air. Because room air conditioners are designed for cooling small spaces, operating costs are reduced. And, room air conditioners can provide personalized temperature and humidity controls that central systems cannot.

### Calculating Cooling Capacity

Cooling capacity is the critical factor in properly selecting a room air conditioner. Cooling capacity is measured in British Thermal Units (BTUs) and typical models will range in capacity from 5,000 BTUs to 28,500 BTUs. Choosing an undersized unit will overwork the unit and it will not cool properly. Choosing an oversized unit will cost more to buy and operate and it will not dehumidify properly. Your dealer can help you to calculate capacity. Be prepared to provide specific information on:

- Room dimensions
- A simple floor plan to show the location of doors and north-facing windows
- The number of people it will serve
- Sources of heat such as lamps, TV and appliances
- An explanation of what's above the intended room
- Your insulation provisions

### Cooling Capacity by Room Size

Measure the length and width of the area to be cooled. Multiply the length by the width to determine square footage or square meters. Locate the room size in the chart below to select the appropriate BTUs. Then use the product information to select the unit for your room.

Room Size		BTU
Sq. Feet.	Sq. Meters	
150	14	Up to 5,000
165	15	5,200
216	20	6,000
350	33	8,000
425	39	9,000
500	46	10,000
640	60	14,000
900	84	15,100
1,110	103	18,000
1,170	109	18,500
1,435	133	22,000
1,672	154	25,000
1,960	182	28,500

### NOTE

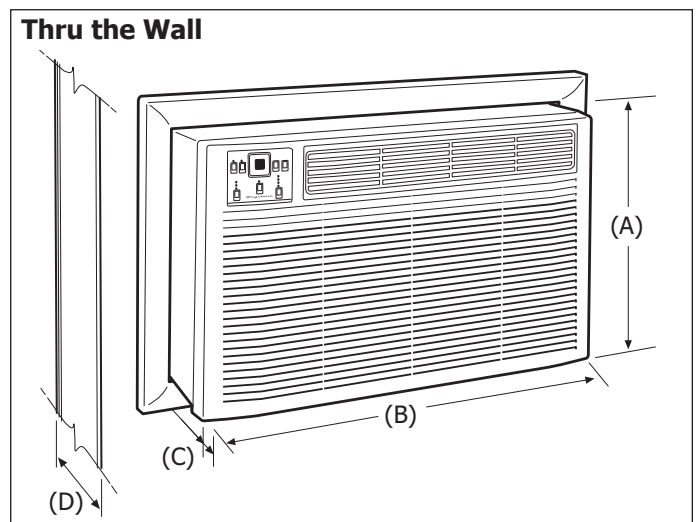
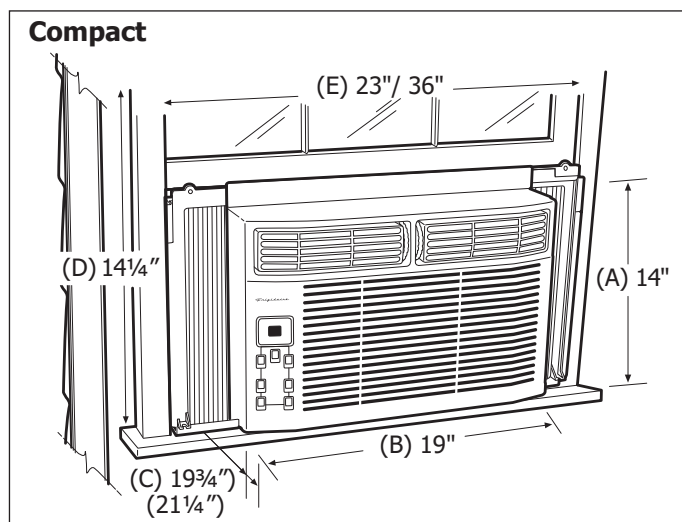
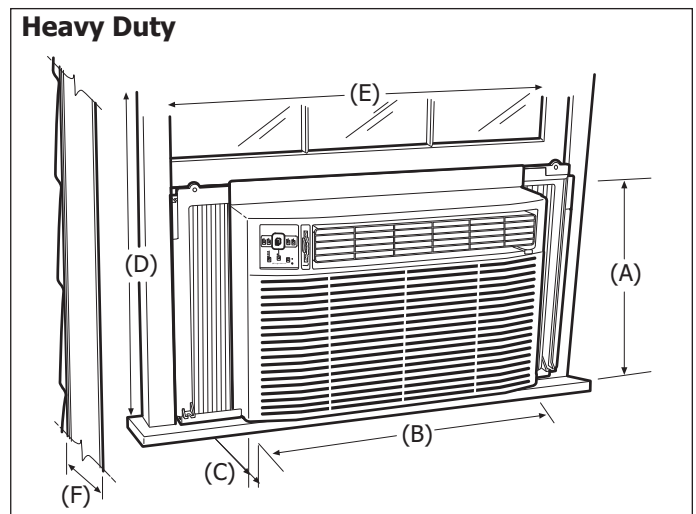
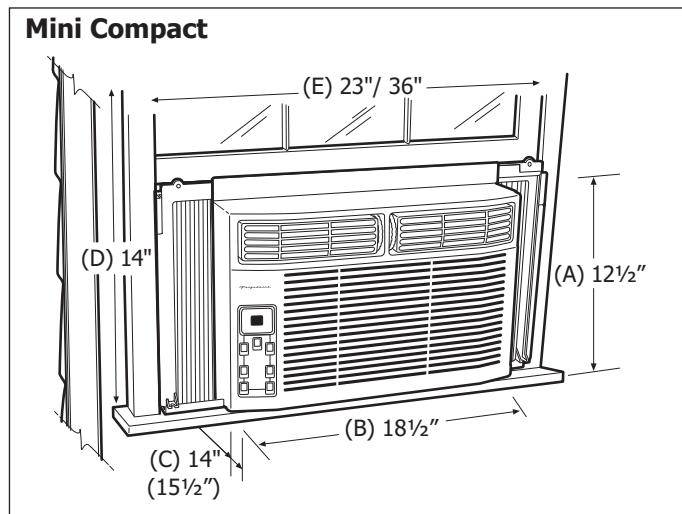
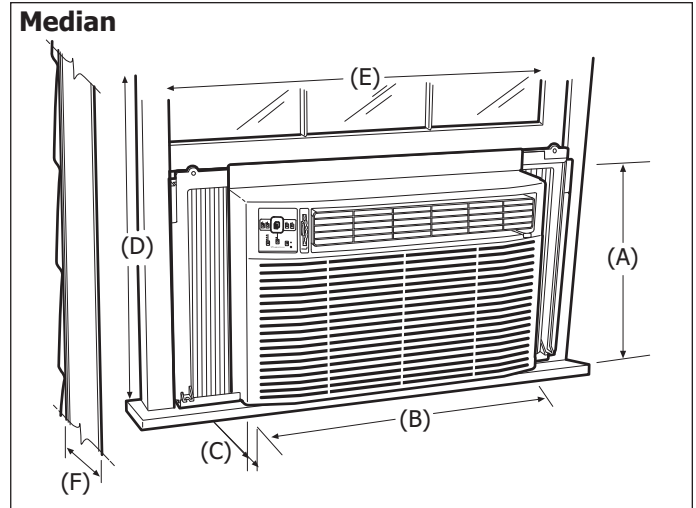
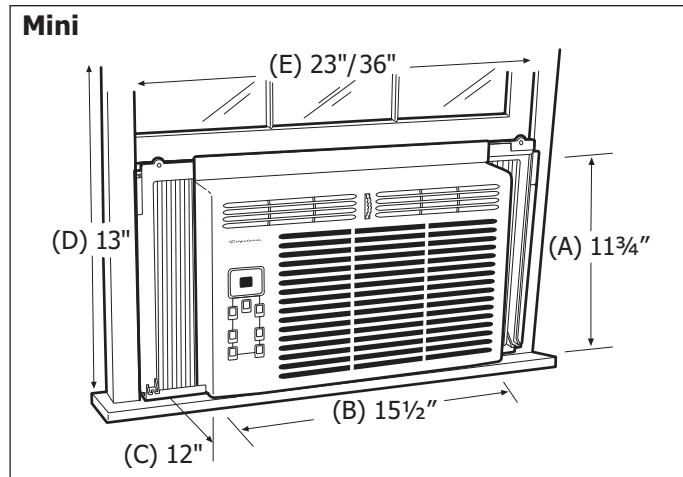
When cooling rooms with uninsulated ceilings, great rooms, or southern or western sun exposures – step up to the next BTU size or consult your sales professional.



## Section 1 Basic Information

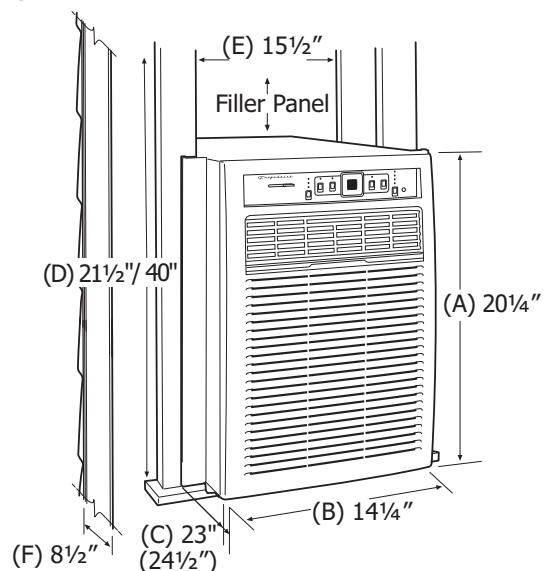
### Model Dimensions

The drawings below and the slider casement illustration on the next page are for referencing the product specification charts on pages 1-13 thru 1-23.



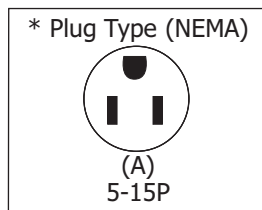
## Section 1 Basic Information

### Slider/Casement

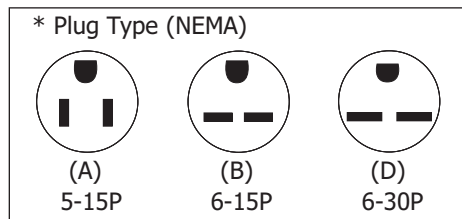


### Electrical Connections

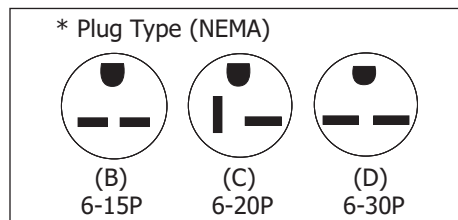
The Mini (FAX), Mini Compact (FAA), Compact (FAC) and Slider/Casement (FAK) Series of air conditioners all use a NEMA (A) type plug.



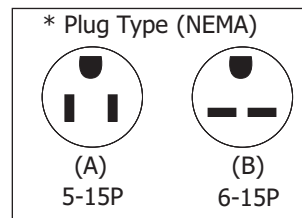
The Median (FAM) Series of air conditioners use NEMA (A), (B), or (D) type plugs depending on model.



The Heavy Duty (FAS) Series of air conditioners use NEMA (B), (C), or (D) type plugs depending on model.



The Thru-The-Wall (FAH) Series of air conditioners use NEMA (A) or (B) type plugs depending on model.



## Section 1 Basic Information

### Product Specification - Mini Air Conditioners

Model	FAX052P7A	FAX054P7A
Series ENERGY STAR®	Frigidaire No	Frigidaire No
<b>Performance</b>		
BTU (Cool)	5,000	5,000
BTU (Heat)		
Dehumidification (Pints/Hour)	0.8	0.8
Cool Area (Sq. Ft.)	150	150
EER	9.7	9.7
<b>Electrical</b>		
Volts	115	115
Amps (Cool)	5.2	5.2
Amps (Heat)		
Watts (Cool)	515	515
Watts (Heat)		
Length of Power Cord	6'	6'
Plug Type (NEMA)*	LCDI (A)	LCDI (A)
<b>Features</b>		
Controls	Mechanical	Electronic
Fan Speeds (Cool/Fan/Heat)	2/2/-	3/3/-
Low Voltage Start-Up	•	•
Auto Cool Function	•	•
Energy Save	•	•
Sleep Mode	•	•
Filter Check	•	•
24 Hour On/Off Timer	•	•
Remote Control	No	No
Air CFM (High/Med/Low)	150-110	150-110
Air Direction Control	2-Way	2-Way
Fresh Air/Exhaust Vent/Closed	No/No/Yes	No/No/Yes
Filter Type	Antimicrobial Mesh	Antimicrobial Mesh
Filter Access	Slide-Out	Slide-Out
Slide-Out Chassis	•	•
Cabinet Louvers	•	•
Rear Grill	•	•
Window Mounting Kit	Pleated Quick Mount	Pleated Quick Mount
<b>Dimensions</b>		
A-Cabinet Height	11-3/4"	11-3/4"
B-Cabinet Width	15-1/2"	15-1/2"
C-Cabinet Depth (with Front)	12"	12"
D-Window Height (Min.)	13"	13"
E-Window Width (Min./Max.)	23"/36"	23"/36"
F-Max. Wall Thickness	•	•
Carton Height	15"	15"
Carton Width	18-1/16"	18-1/16"
Carton Depth	15-1/2"	15-1/2"
Unit Weight	40 Lbs.	40 Lbs.
Shipping Weight	45 Lbs.	45 Lbs.
UPC (0-12505)	27081-9	27082-6

### Mini Compact

Model	FAA055P7A	FAA062P7A
Series ENERGY STAR®	Frigidaire Yes	Frigidaire No
<b>Performance</b>		
BTU (Cool)	5,200	6,000
BTU (Heat)		
Dehumidification (Pints/Hour)	1.1	1.3
Cool Area (Sq. Ft.)	165	216
EER	11.0	9.7
<b>Electrical</b>		
Volts	115	115
Amps (Cool)	4.9	6.0
Amps (Heat)		
Watts (Cool)	475	620
Watts (Heat)		
Length of Power Cord	6'	6'
Plug Type (NEMA)*	LCDI (A)	LCDI (A)
<b>Features</b>		
Controls	Electronic	Mechanical
Fan Speeds (Cool/Fan/Heat)	3/3/-	3/3/-
Low Voltage Start-Up	•	•
Auto Cool Function	•	•
Energy Save	•	•
Sleep Mode	•	•
Filter Check	•	•
24 Hour On/Off Timer	•	•
Remote Control	Full-Function	No
Air CFM (High/Med/Low)	180 /162/150	174/156/144
Air Direction Control	8-Way	8-Way
Fresh Air/Exhaust Vent/Closed	No/No/Yes	No/No/Yes
Filter Type	Clean Air Ionizer	Antimicrobial Mesh
Filter Access	Tilt-Out	Tilt-Out
Slide-Out Chassis	•	•
Cabinet Louvers	•	•
Rear Grill	•	•
Window Mounting Kit	Pleated Quick Mount	Pleated Quick Mount
<b>Dimensions</b>		
A-Cabinet Height	12-1/2"	12-1/2"
B-Cabinet Width	18-1/2"	18-1/2"
C-Cabinet Depth (with Front)	14" (15-1/2")	14" (15-1/2")
D-Window Height (Min.)	14"	14"
E-Window Width (Min./Max.)	23"/36"	23"/36"
F-Max. Wall Thickness	•	•
Carton Height	14-3/4"	14-3/4"
Carton Width	21-3/4"	21-3/4"
Carton Depth	18-1/4"	18-1/4"
Unit Weight	48 Lbs.	49 Lbs.
Shipping Weight	55 Lbs.	56 Lbs.
UPC (0-12505)	27084-0	27087-1

NOTE: All the models available in the Series may not be listed in the chart above.

## Section 1 Basic Information

### Product Specification - Mini Compact Air Conditioners

Model	FAA065P7A	FAA082P7A	FAA084P7A	FAA086P7A
Series ENERGY STAR®	Frigidaire Yes	Frigidaire No	Frigidaire No	Frigidaire Yes
<b>Performance</b>				
BTU (Cool)	6,000	8,000	8,000	8,000
BTU (Heat)				
Dehumidification (Pints/Hour)	1.3	1.7	1.7	1.7
Cool Area (Sq. Ft.)	216	350	350	350
EER	10.7	9.8	9.8	10.8
<b>Electrical</b>				
Volts	115	115	115	115
Amps (Cool)	5.5			
Amps (Heat)		7.5	7.5	7.1
Watts (Cool)	560	815	815	740
Watts (Heat)				
Length of Power Cord	6'	6'	6'	6'
Plug Type (NEMA)*	LCDI (A)	LCDI (A)	LCDI (A)	LCDI (A)
<b>Features</b>				
Controls	Electronic	Mechanical	Electronic	Electronic
Fan Speeds (Cool/Fan/Heat)	3/3/-	3/3/-	3/3/-	3/3/-
Low Voltage Start-Up	•	•	•	•
Auto Cool Function	•	•	•	•
Energy Save	•	•	•	•
Sleep Mode	•	•	•	•
Filter Check	•	•	•	•
24 Hour On/Off Timer	•	•	•	•
Remote Control	Full Function	No	Full-Function	Full-Function & Remote T'Stat
Air CFM (High/Med/Low)	174/156/144	225/204/186	225/204/186	240/216/198
Air Direction Control	8-Way	8-Way	8-Way	8-Way
Fresh Air/Exhaust Vent/Closed	No/No/Yes	No/No/Yes	No/No/Yes	No/No/Yes
Filter Type	Clean Air Ionizer	Antimicrobial Mesh	Antimicrobial Mesh	Clean Air Ionizer
Filter Access	Tilt-Out	Tilt-Out	Tilt-Out	Tilt-Out
Slide-Out Chassis	•	•	•	•
Cabinet Louvers	•	•	•	•
Rear Grill	•	•	•	•
Window Mounting Kit	Pleated Quick Mount	Pleated Quick Mount	Pleated Quick Mount	Pleated Quick Mount
<b>Dimensions</b>				
A-Cabinet Height	12-1/2"	12-1/2"	12-1/2"	12-1/2"
B-Cabinet Width	18-1/2"	18-1/2"	18-1/2"	18-1/2"
C-Cabinet Depth (with Front)	14" (15-1/2")	14" (15-1/2")	14" (15-1/2")	14" (15-1/2")
D-Window Height (Min.)	14"	14"	14"	14"
E-Window Width (Min./Max.)	23"/36"	23"/36"	23"/36"	23"/36"
F-Max. Wall Thickness	•	•	•	•
Carton Height	14-3/4"	14-3/4"	14-3/4"	14-3/4"
Carton Width	21-3/4"	21-3/4"	21-3/4"	21-3/4"
Carton Depth	18-1/4"	18-1/4"	18-1/4"	18-1/4"
Unit Weight	49 Lbs.	53 Lbs.	53 Lbs.	54 Lbs.
Shipping Weight	56 Lbs.	60 Lbs.	60 Lbs.	61 Lbs.
UPC (0-12505)	27090-1	27092-5	27094-9	27096-3

NOTE: All the models available in the Series may not be listed in the chart above.

## Product Specification - Compact Air Conditioners

Model	FAC102P1A	FAC104P1A	FAC106P1A	FAC122P1A
Series ENERGY STAR®	Frigidaire No	Frigidaire No	Frigidaire Yes	Frigidaire No
<b>Performance</b>				
BTU (Cool)	10,000	10,000	10,000	12,000
BTU (Heat)				
Dehumidification (Pints/Hour)	2.7	2.7	3.0	3.8
Cool Area (Sq. Ft.)	500	500	500	640
EER	9.8	9.8	10.8	9.8
<b>Electrical</b>				
Volts	115	115	115	115
Amps (Cool)	10.2	10.2	9.7	11.6
Amps (Heat)				
Watts (Cool)	1,020	1,020	925	1,220
Watts (Heat)				
Length of Power Cord	6'	6'	6'	6'
Plug Type (NEMA)*	LCDI (A)	LCDI (A)	LCDI (A)	LCDI (A)
<b>Features</b>				
Controls	Mechanical	Electronic	Electronic	Mechanical
Fan Speeds (Cool/Fan/Heat)	3/3/-	3/3/-	3/3/-	3/3/-
Low Voltage Start-Up	•	•	•	•
Auto Cool Function	•	•	•	•
Energy Save	•	•	•	•
Sleep Mode	•	•	•	•
Filter Check	•	•	•	•
24 Hour On/Off Timer	•	•	•	•
Remote Control	No	Full-Function	Full-Function & Remote T'Stat	No
Air CFM (High/Med/Low)	318/294/270	318/294/270	288/264/240	288/264/240
Air Direction Control	8-Way	8-Way	8-Way	8-Way
Fresh Air/Exhaust Vent/Closed	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Filter Type	Antimicrobial Mesh	Antimicrobial Mesh	Clean Air Ionizer	Antimicrobial Mesh
Filter Access	Tilt-Out	Tilt-Out	Tilt-Out	Tilt-Out
Slide-Out Chassis	•	•	•	•
Cabinet Louvers	•	•	•	•
Rear Grill	•	•	•	•
Window Mounting Kit	Pleated Quick Mount	Pleated Quick Mount	Pleated Quick Mount	Pleated Quick Mount
<b>Dimensions</b>				
A-Cabinet Height	14"	14"	14"	14"
B-Cabinet Width	19"	19"	19"	19"
C-Cabinet Depth (with Front)	19-3/4" (21-1/4")	19-3/4" (21-1/4")	19-3/4" (21-1/4")	19-3/4" (21-1/4")
D-Window Height (Min.)	14-1/4"	14-1/4"	14-1/4"	14-1/4"
E-Window Width (Min./Max.)	23"/36"	23"/36"	23"/36"	23"/36"
F-Max. Wall Thickness	•	•	•	•
Carton Height	16-3/4"	16-3/4"	16-3/4"	16-3/4"
Carton Width	22-1/4"	22-1/4"	22-1/4"	22-1/4"
Carton Depth	23-1/4"	23-1/4"	23-1/4"	23-1/4"
Unit Weight	68 Lbs.	70 Lbs.	73 Lbs.	75 Lbs.
Shipping Weight	76 Lbs.	78 Lbs.	81 Lbs.	83 Lbs.
UPC (0-12505)	27097-0	27098-7	27100-7	27101-4

NOTE: All the models available in the Series may not be listed in the chart above.

## Section 1 Basic Information

### Product Specification - Compact Air Conditioners

Model	FAC124P1A	FAC126P1A
Series ENERGY STAR®	Frigidaire No	Frigidaire Yes
<b>Performance</b>		
BTU (Cool)	12,000	12,000
BTU (Heat)		
Dehumidification (Pints/Hour)	3.8	3.8
Cool Area (Sq. Ft.)	640	640
EER	9.8	10.8
<b>Electrical</b>		
Volts	115	115
Amps (Cool)	10.2	10.2
Amps (Heat)		
Watts (Cool)	1,020	1,020
Watts (Heat)		
Length of Power Cord	6'	6'
Plug Type (NEMA)*	LCDI (A)	LCDI (A)
<b>Features</b>		
Controls	Electronic	Electronic
Fan Speeds (Cool/Fan/Heat)	3/3/-	3/3/-
Low Voltage Start-Up	•	•
Auto Cool Function	•	•
Energy Save	•	•
Sleep Mode	•	•
Filter Check	•	•
24 Hour On/Off Timer	•	•
Remote Control	Full-Function	Full-Function & Remote T'Stat
Air CFM (High/Med/Low)	288/264/240	288/264/240
Air Direction Control	8-Way	8-Way
Fresh Air/Exhaust Vent/Closed	Yes/Yes/Yes	Yes/Yes/Yes
Filter Type	Antimicrobial Mesh	Clean Air Ionizer
Filter Access	Tilt-Out	Tilt-Out
Slide-Out Chassis	•	•
Cabinet Louvers	•	•
Rear Grill	•	•
Window Mounting Kit	Pleated Quick Mount	Pleated Quick Mount
<b>Dimensions</b>		
A-Cabinet Height	14"	14"
B-Cabinet Width	19"	19"
C-Cabinet Depth (with Front)	19-3/4" (21-1/4")	19-3/4" (21-1/4")
D-Window Height (Min.)	14-1/4"	14-1/4"
E-Window Width (Min./Max.)	23"/36"	23"/36"
F-Max. Wall Thickness	•	•
Carton Height	16-3/4"	16-3/4"
Carton Width	22-1/4"	22-1/4"
Carton Depth	23-1/4"	23-1/4"
Unit Weight	75 Lbs.	80 Lbs.
Shipping Weight	83 Lbs.	88 Lbs.
UPC (0-12505)	27102-1	27104-5

NOTE: All the models available in the Series may not be listed in the chart above.

### Product Specification - Median Air Conditioners

Model	FAM156R1A	FAM186R2A	FAM18ER2A
Series ENERGY STAR®	Frigidaire Yes	Frigidaire Yes	Frigidaire No
<b>Performance</b>			
BTU (Cool)	15,100	18,500/18,200	18,500/18,200
BTU (Heat)			16,000/13,000
Dehumidification (Pints/Hour)	3.8	5.5	5.5
Cool Area (Sq. Ft.)	900	1,170	1,170
EER	10.7	10.7	9.7
<b>Electrical</b>			
Volts	115	230/208	230/208
Amps (Cool)	12.0	7.9/8.6	8.4/9.2
Amps (Heat)			22.2/20.0
Watts (Cool)	1,410	1,730/1,700	1,900/1,880
Watts (Heat)			4,900/4,000
Length of Power Cord	4'	4'	4'
Plug Type (NEMA)*	LCDI (A)	LCDI (B)	LCDI (D)
<b>Features</b>			
Controls	Electronic	Electronic	Electronic
Fan Speeds (Cool/Fan/Heat)	3/3/-	3/3/-	3/3/3
Low Voltage Start-Up	•	•	•
Auto Cool Function	•	•	•
Energy Save	•	•	•
Sleep Mode	•	•	•
Filter Check	•	•	•
24 Hour On/Off Timer	•	•	•
Remote Control	Full-Function & Remote T'Stat	Full-Function & Remote T'Stat	Full-Function with Heat
Air CFM (High/Med/Low)	425/400/375	450/400/350	430/390/350
Air Direction Control	Multi-Directional	Multi-Directional	Multi-Directional
Fresh Air/Exhaust Vent/Closed	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Filter Type	Clean Air Ionizer	Clean Air Ionizer	Antimicrobial Mesh
Filter Access	Tilt-Out	Tilt-Out	Tilt-Out
Slide-Out Chassis	•	•	•
Cabinet Louvers	•	•	•
Rear Grill	•	•	•
Window Mounting Kit	Pleated Quick Mount	Pleated Quick Mount	Pleated Quick Mount
<b>Dimensions</b>			
A-Cabinet Height	17-3/4"	17-3/4"	17-3/4"
B-Cabinet Width	23-5/8"	23-5/8"	23-5/8"
C-Cabinet Depth (with Front)	24" (25-3/8")	24" (25-3/8")	24" (25-3/8")
D-Window Height (Min.)	18-1/2"	18-1/2"	18-1/2"
E-Window Width (Min./Max.)	26-1/2"/40-1/2"	26-1/2"/40-1/2"	26-1/2"/40-1/2"
F-Max. Wall Thickness	8"	8"	8"
Carton Height	19-3/4"	19-3/4"	19-3/4"
Carton Width	26-1/16"	26-1/16"	26-1/16"
Carton Depth	30-1/4"	30-1/4"	30-1/4"
Unit Weight	111 Lbs.	122 Lbs.	123 Lbs.
Shipping Weight	131 Lbs.	142 Lbs.	143 Lbs.
UPC (0-12505)	27182-3	27185-4	27184-7

NOTE: All the models available in the Series may not be listed in the chart above.

## Section 1 Basic Information

### Product Specification - Heavy Duty Air Conditioners

Model	FAS226R2A	FAS256R2A	FAS25ER2A	FAS296R2A
Series ENERGY STAR®	Frigidaire Yes	Frigidaire Yes	Frigidaire No	Frigidaire No
<b>Performance</b>				
BTU (Cool)	22,000/21,600	25,000/24,700	25,000/24,700	28,500/28,000
BTU (Heat)			16,000/13,000	
Dehumidification (Pints/Hour)	7.2	8.0	8.0	9.5
Cool Area (Sq. Ft.)	1,435	1,672	1,672	1,960
EER	9.4	9.4	9.4	8.5
<b>Electrical</b>				
Volts	230/208	230/208	230/208	230/208
Amps (Cool)	10.8/11.3	12.0/13.0	12.0/13.0	15.5/16.6
Amps (Heat)			22.5/20.0	
Watts (Cool)	2,340/2,300	2,660/2,630	2,660/2,630	3,365/3,300
Watts (Heat)			4,900/4,000	
Length of Power Cord	4'	4'	4'	4'
Plug Type (NEMA)*	LCDI (B)	LCDI (B)	LCDI (D)	LCDI (D)
<b>Features</b>				
Controls	Electronic	Electronic	Electronic	Electronic
Fan Speeds (Cool/Fan/Heat)	3/3/-	3/3/-	3/3/3	3/3/3
Low Voltage Start-Up	•	•	•	•
Auto Cool Function	•	•	•	•
Energy Save	•	•	•	•
Sleep Mode	•	•	•	•
Filter Check	•	•	•	•
24 Hour On/Off Timer	•	•	•	•
Remote Control	Full Function & Remote T'Stat	Full-Function & Remote T'Stat	Full-Function with Heat	Full-Function & Remote T'Stat
Air CFM (High/Med/Low)	500/425/350	492/421/350	492/421/350	500/437/375
Air Direction Control	Multi-Directional	Multi-Directional	Multi-Directional	Multi-Directional
Fresh Air/Exhaust Vent/Closed	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Filter Type	Clean Air Ionizer	Clean Air Ionizer	Antimicrobial Mesh	Clean Air Ionizer
Filter Access	Tilt-Out	Tilt-Out	Tilt-Out	Tilt-Out
Slide-Out Chassis	•	•	•	•
Cabinet Louvers	•	•	•	•
Rear Grill	•	•	•	•
Window Mounting Kit	Pleated Quick Mount	Pleated Quick Mount	Pleated Quick Mount	Pleated Quick Mount
<b>Dimensions</b>				
A-Cabinet Height	18-5/8"	18-5/8"	18-5/8"	18-5/8"
B-Cabinet Width	26-1/2"	26-1/2"	26-1/2"	26-1/2"
C-Cabinet Depth (with Front)	25" (26-1/2")	25" (26-1/2")	25" (26-1/2")	25" (26-1/2")
D-Window Height (Min.)	19"	19"	19"	19"
E-Window Width (Min./Max.)	31"/42"	31"/42"	31"/42"	31"/42"
F-Max. Wall Thickness	10"	10"	10"	10"
Carton Height	20-1/4"	20-1/4"	21-1/4"	21-1/4"
Carton Width	29-1/2"	29-1/2"	29-1/2"	29-1/2"
Carton Depth	31-1/4"	31-1/4"	31-1/4"	31-1/4"
Unit Weight	136 Lbs.	142 Lbs.	145 Lbs.	161 Lbs.
Shipping Weight	151 Lbs.	162 Lbs.	165 Lbs.	181 Lbs.
UPC (0-12505)	27187-8	27188-5	27190-8	27191-5

NOTE: All the models available in the Series may not be listed in the chart above.



## Product Specification - Through The Wall Air Conditioners

Model	FAH086S1T	FAH08ES1T	FAH08ER1T	FAH106S1T
Series ENERGY STAR®	Frigidaire Yes	Frigidaire No	Frigidaire No	Frigidaire Yes
<b>Performance</b>				
BTU (Cool)	8,000	8,000	8,000	10,000
BTU (Heat)		4,200	4,200	
Dehumidification (Pints/Hour)	1.8	1.8	1.8	2.6
Cool Area (Sq. Ft.)	350	350	350	500
EER	9.4	9.4	9.4	9.4
<b>Electrical</b>				
Volts	115	115	115	115
Amps (Cool)	7.4	7.4	7.6	9.9
Amps (Heat)		11.5	12.3	
Watts (Cool)	850	850	850	1,065
Watts (Heat)		1,250	1,250	
Length of Power Cord	5.9'	5.9'	4.4'	5.9'
Plug Type (NEMA)*	LCDI (A)	LCDI (A)	LCDI (A)	LCDI (A)
<b>Features</b>				
Controls	Electronic	Electronic	Electronic	Electronic
Fan Speeds (Cool/Fan/Heat)	3/3/-	3/3/3	3/3/3	3/3/-
Low Voltage Start-Up	•	•	•	•
Auto Cool Function	•	•	•	•
Energy Save	•	•	•	•
Sleep Mode	•	•	•	•
Filter Check	•	•	•	•
24 Hour On/Off Timer	•	•	•	•
Remote Control	Full-Function Remote T'Stat	Full-Function with Heat	Full-Function	Full-Function Remote T'Stat
Air CFM (High/Med/Low)	250/230/205	250/230/205	250/230/205	258/224/185
Air Direction Control	4-Way	4-Way	4-Way	4-Way
Fresh Air/Exhaust Vent/Closed	No/No/Yes	No/No/Yes	No/No/Yes	No/No/Yes
Filter Type	Antimicrobial Mesh	Antimicrobial Mesh	Antimicrobial Mesh	Antimicrobial Mesh
Filter Access	Slide-Out	Slide-Out	Slide-Out	Slide-Out
Slide-Out Chassis	•	•	•	•
Cabinet Louvers	•	•	•	•
Rear Grill	•	•	•	•
Window Mounting Kit	Universal Trim Kit	Universal Trim Kit	Universal Trim Kit	Universal Trim Kit
<b>Dimensions</b>				
A-Cabinet Height	14-1/2"	14-1/2"	14-1/2"	14-1/2"
B-Cabinet Width	24"	24"	24"	24"
C-Cabinet Depth (with Front)	19" (20-1/2")	19" (20-1/2")	19" (20-1/2")	19" (20-1/2")
D-Window Height (Min.)	18"	18"	18"	18"
Carton Height	17"	17"	17"	17"
Carton Width	27"	27"	27"	27"
Carton Depth	28"	28"	28"	28"
Unit Weight	69 Lbs.	75 Lbs.	76 Lbs.	76 Lbs.
Shipping Weight	79 Lbs.	85 Lbs.	101 Lbs.	86 Lbs.
UPC (0-12505)	27305-6	27310-0	27198-4	27306-3

NOTE: All the models available in the Series may not be listed in the chart above.

## Section 1 Basic Information

### Product Specification - Through The Wall Air Conditioners

Model	FAH106S2T	FAH10ES2T	FAH10ER2T	FAH126S2T
Series ENERGY STAR®	Frigidaire Yes	Frigidaire No	Frigidaire No	Frigidaire No
<b>Performance</b>				
BTU (Cool)	10,000/9,800	10,000/9,800	10,000/9,800	12,000/11,700
BTU (Heat)		10,000/8,600	10,000/8,600	
Dehumidification (Pints/Hour)	2.8	2.8	2.8	3.5
Cool Area (Sq. Ft.)	500	500	500	640
EER	9.4	9.4	9.4	9.0
<b>Electrical</b>				
Volts	230/208	230/208	230/208	230/208
Amps (Cool)	4.9/5.3	4.9/5.3	4.8/5.1	5.9/6.6
Amps (Heat)		15.5/14.2	15.3/14.0	
Watts (Cool)	1,060/1,045	1,065/1,045	1,065/1,045	1,335/1,300
Watts (Heat)		3,450/2,800	3,450/2,800	
Length of Power Cord	5.9'	5.9'	4.4'	5.9'
Plug Type (NEMA)*	LCDI (B)	LCDI (B)	LCDI (B)	LCDI (B)
<b>Features</b>				
Controls	Electronic	Electronic	Electronic	Electronic
Fan Speeds (Cool/Fan/Heat)	3/3/-	3/3/3	3/3/3	3/3/-
Low Voltage Start-Up	•	•	•	•
Auto Cool Function	•	•	•	•
Energy Save	•	•	•	•
Sleep Mode	•	•	•	•
Filter Check	•	•	•	•
24 Hour On/Off Timer	•	•	•	•
Remote Control	Full-Function Remote T'Stat	Full-Function with Heat	Full-Function with Heat	Full-Function Remote T'Stat
Air CFM (High/Med/Low)	252/221/185	252/221/185	252/221/185	264/230/195
Air Direction Control	4-Way	4-Way	4-Way	4-Way
Fresh Air/Exhaust Vent/Closed	No/No/Yes	No/No/Yes	No/No/Yes	No/No/Yes
Filter Type	Antimicrobial Mesh	Antimicrobial Mesh	Antimicrobial Mesh	Antimicrobial Mesh
Filter Access	Slide-Out	Slide-Out	Slide-Out	Slide-Out
Slide-Out Chassis	•	•	•	•
Cabinet Louvers	•	•	•	•
Rear Grill	•	•	•	•
Window Mounting Kit	Universal Trim Kit	Universal Trim Kit	Universal Trim Kit	Universal Trim Kit
<b>Dimensions</b>				
A-Cabinet Height	14-1/2"	14-1/2"	14-1/2"	14-1/2"
B-Cabinet Width	24"	24"	24"	24"
C-Cabinet Depth (with Front)	19" (20-1/2")	19" (20-1/2")	19" (20-1/2")	19" (20-1/2")
D-Window Height (Min.)	18"	18"	18"	18"
Carton Height	17"	17"	17"	17"
Carton Width	27"	27"	27"	27"
Carton Depth	28"	28"	28"	28"
Unit Weight	78 Lbs.	84 Lbs.	87 Lbs.	80 Lbs.
Shipping Weight	88 Lbs.	94 Lbs.	108 Lbs.	90 Lbs.
UPC (0-12505)	27307-0	27311-7	27199-1	27308-7

NOTE: All the models available in the Series may not be listed in the chart above.

## Product Specification - Through The Wall Air Conditioners

Model	FAH126R2T	FAH12ES2T	FAH12ER2T	FAH146S2T
Series ENERGY STAR®	Frigidaire No	Frigidaire No	Frigidaire No	Frigidaire No
<b>Performance</b>				
BTU (Cool)	12,000/11,700	12,000/11,700	12,000/11,700	14,000/13,600
BTU (Heat)		10,000/8,600	10,000/8,600	
Dehumidification (Pints/Hour)	3.5	3.5	3.5	4.3
Cool Area (Sq. Ft.)	640	640	640	640
EER	9.0	9.0	9.0	9.0
<b>Electrical</b>				
Volts	230/208	230/208	230/208	230/208
Amps (Cool)	6.0/6.7	5.9/6.6	6.0/6.5	7.0/7.9
Amps (Heat)		15.6/14.3	16.0/14.5	
Watts (Cool)	1,335/1,300	1,335/1,300	1,335/1,300	1,550/1,520
Watts (Heat)		3,450/2,800	3,450/2,800	
Length of Power Cord	4.4'	5.9'	4.4'	5.9'
Plug Type (NEMA)*	LCDI (B)	LCDI (B)	LCDI (B)	LCDI (B)
<b>Features</b>				
Controls	Electronic	Electronic	Electronic	Electronic
Fan Speeds (Cool/Fan/Heat)	3/3/-	3/3/3	3/3/3	3/3/-
Low Voltage Start-Up	•	•	•	•
Auto Cool Function	•	•	•	•
Energy Save	•	•	•	•
Sleep Mode	•	•	•	•
Filter Check	•	•	•	•
24 Hour On/Off Timer	•	•	•	•
Remote Control	Full-Function Remote T'Stat	Full-Function with Heat	Full-Function with Heat	Full-Function & Remote T'Stat
Air CFM (High/Med/Low)	264/230/195	264/230/195	264/230/195	312/255/195
Air Direction Control	4-Way	4-Way	4-Way	4-Way
Fresh Air/Exhaust Vent/Closed	No/No/Yes	No/No/Yes	No/No/Yes	No/No/Yes
Filter Type	Antimicrobial Mesh	Antimicrobial Mesh	Antimicrobial Mesh	Antimicrobial Mesh
Filter Access	Slide-Out	Slide-Out	Slide-Out	Slide-Out
Slide-Out Chassis	•	•	•	•
Cabinet Louvers	•	•	•	•
Rear Grill	•	•	•	•
Window Mounting Kit	Universal Trim Kit	Universal Trim Kit	Universal Trim Kit	Universal Trim Kit
<b>Dimensions</b>				
A-Cabinet Height	14-1/2"	14-1/2"	14-1/2"	14-1/2"
B-Cabinet Width	24"	24"	24"	24"
C-Cabinet Depth (with Front)	19" (20-1/2")	19" (20-1/2")	19" (20-1/2")	19" (20-1/2")
D-Window Height (Min.)	18"	18"	18"	18"
Carton Height	17"	17"	17"	17"
Carton Width	27"	27"	27"	27"
Carton Depth	28"	28"	28"	28"
Unit Weight	86 Lbs.	87 Lbs.	91 Lbs.	92 Lbs.
Shipping Weight	108 Lbs.	97 Lbs.	112 Lbs.	102 Lbs.
UPC (0-12505)	27196-0	27312-4	27200-4	27309-4
Wring Diagram	Page 7-2	Page 7-2	Page 7-2	Page 7-2

NOTE: All the models available in the Series may not be listed in the chart above.

## Section 1 Basic Information

### Product Specification - Through The Wall Air Conditioners

Model	FAH146R2T	FAH14ER2T
Series ENERGY STAR®	Frigidaire No	Frigidaire No
<b>Performance</b>		
BTU (Cool)	14,000/13,600	14,000/13,600
BTU (Heat)		10,600/8,600
Dehumidification (Pints/Hour)	4.3	4.3
Cool Area (Sq. Ft.)	640	640
EER	9.0	9.0
<b>Electrical</b>		
Volts	230/208	230/208
Amps (Cool)	8.1/8.7	8.1/8.7
Amps (Heat)		15.2/13.8
Watts (Cool)	1,550/1,520	1,550/1,520
Watts (Heat)		3,450/2,800
Length of Power Cord	5.9'	5.9'
Plug Type (NEMA)*	LCDI (B)	LCDI (B)
<b>Features</b>		
Controls	Electronic	Electronic
Fan Speeds (Cool/Fan/Heat)	3/3/-	3/3/3
Low Voltage Start-Up	•	•
Auto Cool Function	•	•
Energy Save	•	•
Sleep Mode	•	•
Filter Check	•	•
24 Hour On/Off Timer	•	•
Remote Control	Full-Function & Remote T'Stat	Full-Function with Heat
Air CFM (High/Med/Low)	312/255/195	312/255/195
Air Direction Control	4-Way	4-Way
Fresh Air/Exhaust Vent/Closed	No/No/Yes	No/No/Yes
Filter Type	Antimicrobial Mesh	Antimicrobial Mesh
Filter Access	Slide-Out	Slide-Out
Slide-Out Chassis	•	•
Cabinet Louvers	•	•
Rear Grill	•	•
Window Mounting Kit	Universal Trim Kit	Universal Trim Kit
<b>Dimensions</b>		
A-Cabinet Height	14-1/2"	14-1/2"
B-Cabinet Width	24"	24"
C-Cabinet Depth (with Front)	22" (23-1/2")**	22" (23-1/2")**
D-Window Height (Min.)	18"	18"
Carton Height	17-5/8"	17-3/4"
Carton Width	26-3/4"	26-3/4"
Carton Depth	28-1/2"	28-1/2"
Unit Weight	109 Lbs.	109 Lbs.
Shipping Weight	124 Lbs.	124 Lbs.
UPC (0-12505)	27197-7	27201-1
**Protrudes 3" more from the wall than other models.		

\*\*Protrudes 3" more from the wall than other models.

NOTE: All the models available in the Series may not be listed in the chart above.

## Product Specification - Slider / Casement Air Conditioners

Model	FAK085R7V	FAK104R1V	FAK124R1V
Series ENERGY STAR®	Frigidaire Yes	Frigidaire No	Frigidaire No
<b>Performance</b>			
BTU (Cool)	8,000	10,000	12,000
Dehumidification (Pints/Hour)	3.0	3.4	3.6
Cool Area (Sq. Ft.)	350	500	640
EER	10.5	9.5	9.5
<b>Electrical</b>			
Volts	115	115	115
Amps (Cool)	7.2	10.0	12.0
Watts (Cool)	760	1,050	1,260
Length of Power Cord	6'	6'	6-1/2'
Plug Type (NEMA)*	LCDI (A)	LCDI (A)	LCDI (A)
<b>Features</b>			
Controls	Electronic	Electronic	Electronic
Fan Speeds (Cool/Fan/Heat)	3/3/-	3/3/-	3/3/-
Low Voltage Start-Up	•	•	•
Auto Cool Function	•	•	•
Energy Save	•	•	•
Sleep Mode	•	•	•
Filter Check	•	•	•
24 Hour On/Off Timer	•	•	•
Remote Control	Full-Function	Full-Function	Full-Function
Air CFM (High/Med/Low)	380/270/160	485/355/205	500/350/205
Air Direction Control	4-Way	4-Way	4-Way
Fresh Air/Exhaust Vent/Closed	No/No/Yes	No/No/Yes	No/No/Yes
Filter Type	Antimicrobial Mesh	Antimicrobial Mesh	Antimicrobial Mesh
Filter Access	Slide-Out	Slide-Out	Slide-Out
Cabinet Louvers	•	•	•
Window Mounting Kit	Easy Mount/High	Easy Mount/High	Easy Mount/High
<b>Dimensions</b>			
A-Cabinet Height	17-3/4"	17-3/4"	17-3/4"
B-Cabinet Width	23-5/8"	23-5/8"	23-5/8"
C-Cabinet Depth (with Front)	24" (25-3/8")	24" (25-3/8")	24" (25-3/8")
D-Window Height (Min.)	18-1/2"	18-1/2"	18-1/2"
E-Window Width (Min./Max.)	26-1/2"/40-1/2"	26-1/2"/40-1/2"	26-1/2"/40-1/2"
F-Max. Wall Thickness	8"	8"	8"
Carton Height	19-3/4"	19-3/4"	19-3/4"
Carton Width	26-1/16"	26-1/16"	26-1/16"
Carton Depth	30-1/4"	30-1/4"	30-1/4"
Unit Weight	111 Lbs.	122 Lbs.	123 Lbs.
Shipping Weight	131 Lbs.	142 Lbs.	143 Lbs.
UPC (0-12505)	27182-3	27185-4	27184-7

NOTE: All the models available in the Series may not be listed in the chart above.

## Section 1 Basic Information

### Model Number Coding

<b><u>FAH</u></b>	<b><u>08</u></b>	<b><u>3</u></b>	<b><u>R</u></b>	<b><u>1</u></b>	<b><u>T</u></b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>

#### First Letter = Brand:

F – Frigidaire  
W – White  
Westinghouse  
G – Gibson  
P – Philco

#### Second Letter = Product:

A - Air Conditioner.  
D - Dehumidifier

#### Third Letter = Chassis Type:

X – OPP 5  
A – MS2  
B – Vista/Low Profile  
C – COM2  
S – Heavy Duty  
H – Thru-The-Wall / Builder line  
K – Slider Casement  
P – Portable  
L – Dehumidifier (Frigidaire)  
K – Dehumidifier (Lowe's)  
Z – SLO3 & Custom Models for PR, International Etc  
For Dehums usually refers to Customer Chanel

#### 2 (xx) - BTU Capacity

05 – 5,000 series  
06 – 6,000 series  
07 – 7,000 series  
08 – 8,000 series  
09 – 9,000 series  
10 – 10,000 series  
12 – 12,000 series  
15 – 15,000 series  
18 – 18,000 series  
22 – 22,000 series  
25 – 25,000 series  
29 – 28,500 series

#### 3 - Feature Specifications:

0 - Mechanical Controls - Non Energy Star – 2 or 3 Speed, (Models Usually sold Customer Specific)  
1 - Mechanical Controls - Non Energy Star – Single Speed  
2 - Mechanical Controls - Non Energy Star – 2 or 3 Speed  
3 - Mechanical Controls - Energy Star – 3 Speed  
4 - Electronic Controls - Non Energy Star  
5 - Electronic Controls - Energy Star, with Ionizer  
6 - Electronic Controls - Energy Star, with Ionizer & Remote Sensing Thermostat, (Except FAS296 which is Non Energy Star)  
7 - Electronic Controls - Energy Star, with Designer Fronts, (Models Usually sold Customer Specific)  
E - Electronic Controls with Heater  
H - Electronic Controls with Heater

#### 4 - Refrigeration Design For Model Year

N = 2004  
P = 2005  
Q = 2006  
R = 2007  
S = 2008  
T = 2009  
U = 2010 etc

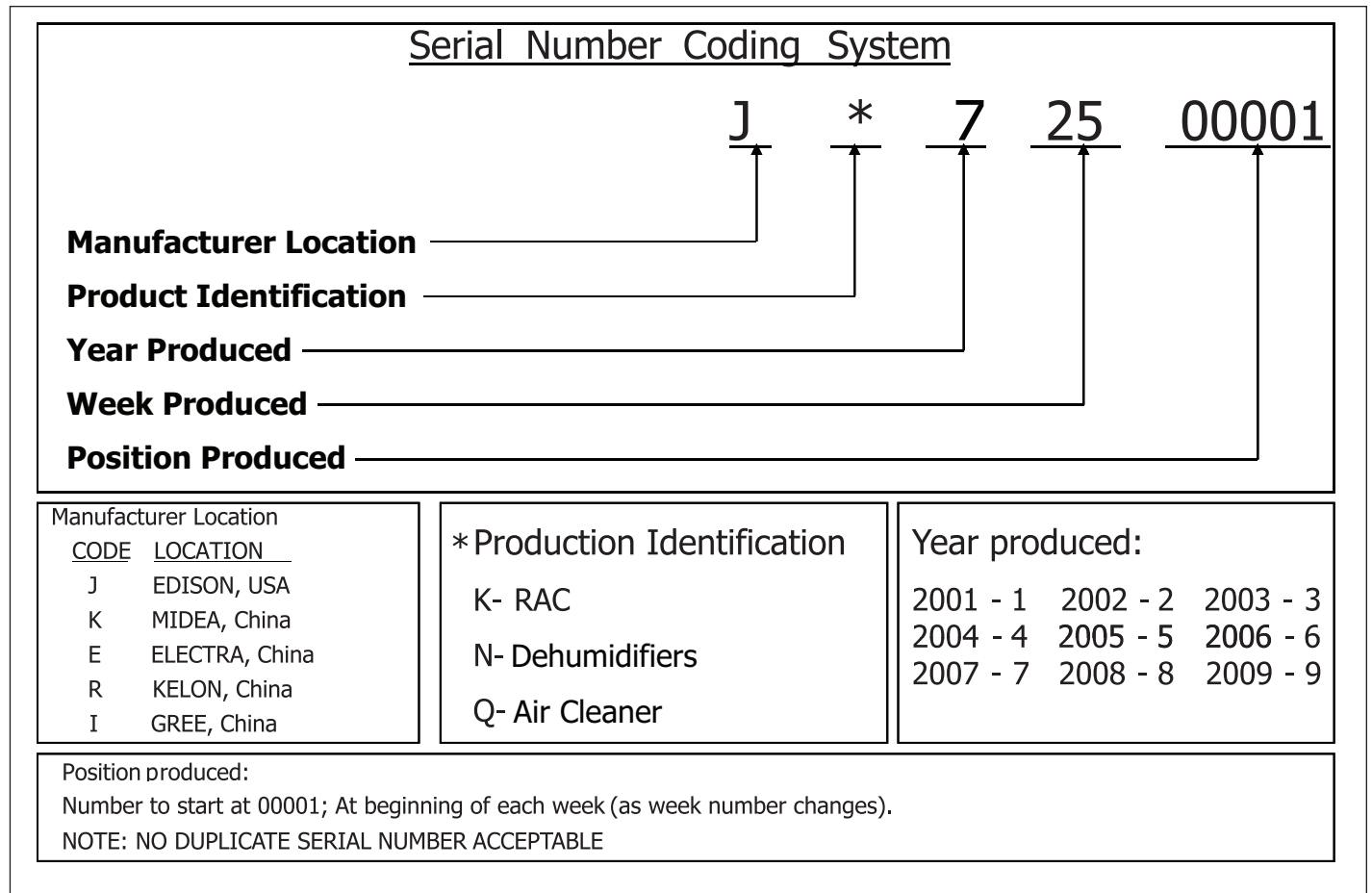
#### 5 - Electrical Type:

1 - Voltage (115V above  
7.5 amps)  
2 - Voltage (230V)  
7 - Voltage (115V below  
7.5 amps)

#### 6 - Kit Type:

T – Trim Kit with TTW  
A – Window Kit with most models  
B – Low Profile Kit  
C – Puerto Rico Kit (If Any)  
V – Vertical Window kit for Slider  
Casement  
Z – Portable Exhaust Kit

## Serial Number Coding



## Section 1 Basic Information

### Room Air Conditioner Warranty

This appliance is warranted by Electrolux. Electrolux has authorized Frigidaire Consumer Services and their authorized servicers to perform service under this warranty. Electrolux authorizes no one else to change or add to any of these obligations under this warranty. Any obligations for service and parts under this warranty must be performed by Frigidaire Consumer Services or an authorized Frigidaire servicer.

	WARRANTY PERIOD	FRIGIDAIRE, THROUGH ITS AUTHORIZED SERVICERS, WILL:	THE CONSUMER WILL BE RESPONSIBLE FOR:
<b>FULL ONE-YEAR WARRANTY</b>	One year from original purchase date.	Pay all costs for repairing or replacing parts of this appliance which prove to be defective in materials or workmanship.	Costs of service calls that are listed under NORMAL RESPONSIBILITIES OF THE CONSUMER.*
<b>LIMITED 2-5 YEAR WARRANTY</b> (Sealed System)	Second through fifth years from original purchase date.	Repair or replace any parts in the Sealed Refrigeration System (compressor, condenser, evaporator and tubing) proves to be defective in materials or workmanship.	Diagnostic costs and any removal, transportation and reinstallation costs which are required because of service. Costs for labor, parts and transportation other than with respect to the Sealed Refrigeration System.

#### \*NORMAL RESPONSIBILITIES OF THE CONSUMER

This warranty applies only to products in ordinary household use, and the consumer is responsible for the items listed below.

1. Proper use of the appliance in accordance with instructions provided with the product.
2. Proper installation by an authorized servicer in accordance with instructions provided with the appliance and in accordance with all local plumbing, electrical and/or gas codes.
3. Proper connection to a grounded power supply of sufficient voltage, replacement of blown fuses, repair of loose connections or defects in house wiring.
4. Expenses for making the appliance accessible for servicing, such as removal of trim, cupboards, shelves, etc., which are not a part of the appliance when it was shipped from the factory.
5. Damages to finish after installation.
6. Damage to unit after removal from packaging carton.

#### EXCLUSIONS - This warranty does not cover the following:

1. CONSEQUENTIAL OR INCIDENTAL DAMAGES SUCH AS PROPERTY DAMAGE AND INCIDENTAL EXPENSES RESULTING FROM ANY BREACH OF THIS WRITTEN OR ANY IMPLIED WARRANTY.

**Note:** Some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation or exclusion may not apply to you.

2. Service calls which do not involve malfunction or defects in workmanship or material, or for appliances not in ordinary household use. The consumer shall pay for such service calls.
3. Damages caused by services performed by persons other than authorized Frigidaire servicers; use of parts other than Frigidaire Genuine Renewal Parts; obtained from persons other than such servicers; or external causes such as abuse, misuse, inadequate power supply or acts of God.
4. Products with original serial numbers that have been removed or altered and cannot be readily determined.

IF YOU NEED SERVICE Keep your bill of sale, delivery slip, or some other appropriate payment record. The date on the bill establishes the warranty period should service be required. If service is performed, it is in your best interest to obtain and keep all receipts. This written warranty gives you specific legal rights. You may also have other rights that vary from state to state. Service under this warranty must be obtained by following these steps, in order:

1. Contact Frigidaire Consumer Services or an authorized Frigidaire servicer.
2. If there is a question as to where to obtain service, contact our Consumer Relations Department at:

Frigidaire Company  
P.O. Box 212378  
Augusta, GA 30917  
800-444-4944

# FRIGIDAIRE

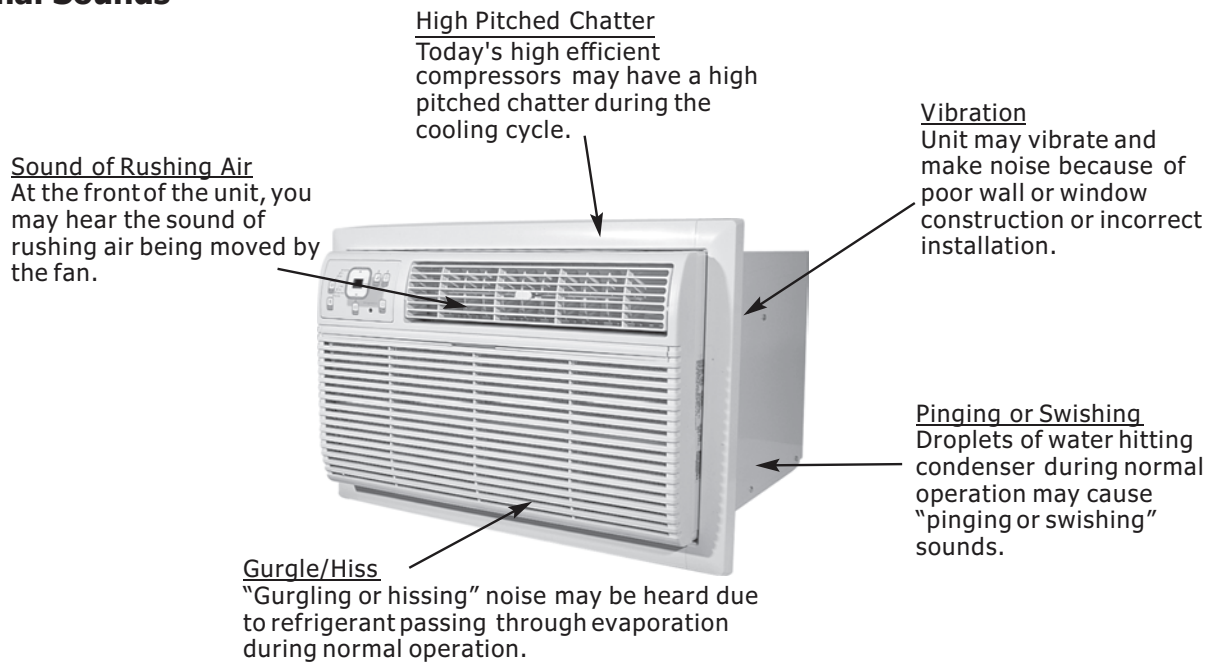
CANADA  
Electrolux Canada Group  
6150 McLaughlin Road  
Mississauga, Ontario L5R 4C2  
1-866-213-9397

Product features or specifications as described or illustrated are subject to change without notice. All warranties are made by Electrolux. This warranty applies only in the 50 states of the U.S.A., Puerto Rico and Canada.

FOR SERVICE CALL 1-800-444-4944



### Normal Sounds



### Cleaning

Clean your air conditioner occasionally to keep it looking new. Be sure to unplug the unit before cleaning to prevent shock or fire hazards.

#### Air Filter Cleaning

The air filter should be checked at least once a month to see if cleaning is necessary. Trapped particles in the filter can build up and cause an accumulation of frost on the cooling coils.

1. Grasp the filter by the center and pull up and out.
2. Wash the filter using liquid dishwashing detergent and warm water. Rinse filter thoroughly. Gently shake excess water from the filter. Be sure filter is thoroughly dry before replacing.
3. Or, instead of washing you may vacuum the filter clean.

#### Cabinet Cleaning

1. Be sure to unplug the air conditioner to prevent shock or fire hazard. The cabinet and front may be dusted with an oil-free cloth or washed with a cloth dampened in a solution of warm water and mild liquid dishwashing detergent. Rinse thoroughly and wipe dry.
2. Never use harsh cleaners, wax or polish on the cabinet front.
3. Be sure to wring excess water from the cloth before wiping around the controls. Excess water in or around the controls may cause damage to the air conditioner.
4. Plug in air conditioner.

#### Winter Storage

If you plan to store the air conditioner for the winter, cover it with plastic or return it to the original carton.

NOTE: To prevent rust or electrical connections from being damaged, store air conditioner in an upright position and a dry place.

## Section 1 Basic Information

## Notes

[illegible]

## Section 2 Installation

### Models FAA, FAC and FAX Room Air Conditioner Installation Instructions

Model FAA, FAC and FAX air conditioners are designed to install in standard double hung windows with opening widths of 23 to 36 inches (584 mm to 914 mm) (See Figure 2-1)

Lower sash must open sufficiently to allow a clear vertical opening of 14-1/4" inches (356 mm). The FAX series only requires a 13" (330 mm) vertical opening. Side louvers and the rear of the RAC unit must have clear air space to allow enough airflow through the condenser for heat removal. The rear of the unit must be outdoors, not inside a building or garage.

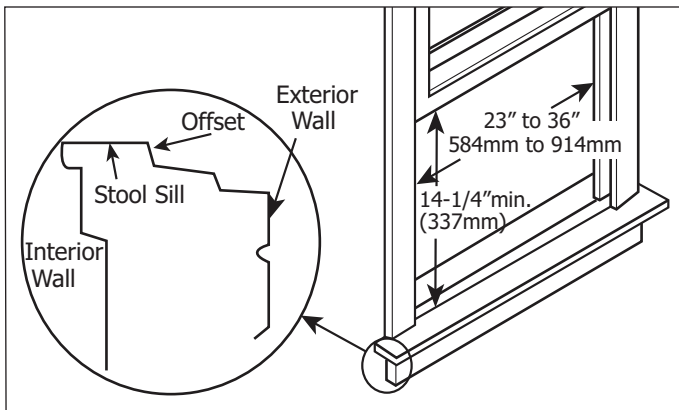


Figure 2-1.

#### Mounting Hardware

3/4" Screws	Qty 7
Lock Frame	Qty 2
Sash Lock	Qty 1

#### Tools Needed

Phillips Screwdriver  
Drill (For pilot holes)

#### NOTE

Do not use any screws other than those specified here.

#### CAUTION

When handling unit, be careful to avoid cuts from sharp metal edges and aluminum fins on front and rear coils.

Before installing unit, the top rail must be assembled on the unit.

#### Top Rail Hardware

3/8" Screw	Qty 4
Top Rail	Qty 1

#### Tool Needed

Phillips Screwdriver

1. Remove air conditioner from carton and place on a flat surface.
2. Remove top rail from packaging material.
3. Align the hole in the top rail with those in the top of the unit then secure with the 3/8" screws. (See Figure 2-2)

#### NOTE

For safety reasons, all four (4) screws must be securely fastened.

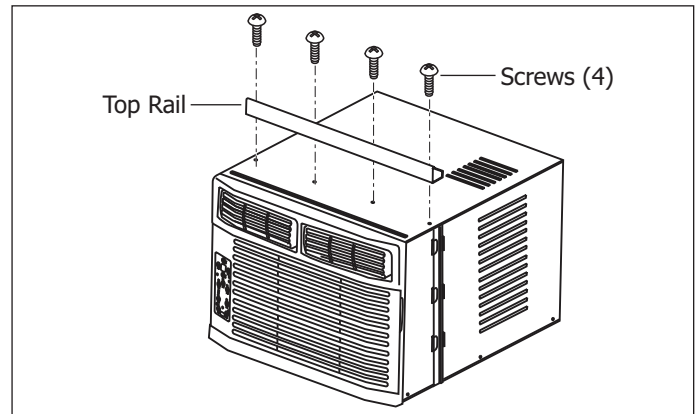


Figure 2-2.

### How to Install

#### NOTE

Top Rail and Sliding Panels at each side are offset to provide the proper pitch to the rear of (5/16"). This is necessary for proper condensed water utilization and drainage. If you are not using the Side Panels for any reason, this pitch to the rear must be maintained!

1. Place unit on floor, a bench or table. There is a left and right window filler panel, be sure to use the proper panel for each side. When installed, the flange for securing the panel to the window sill will be facing into the room.
  - A. Hold the accordion filler panel in one hand and gently pull back the center to free the open end. (See Figure 2-3)
  - B. Slide the free end ("I" section) of the panel into the cabinet as shown in Figures 2-4, 2-5 and 2-6. Slide the panel down. Be sure to leave enough space to slip the top and bottom of the of the frame into the rails on the cabinet.

## Section 2 Installation



**Figure 2-3.**



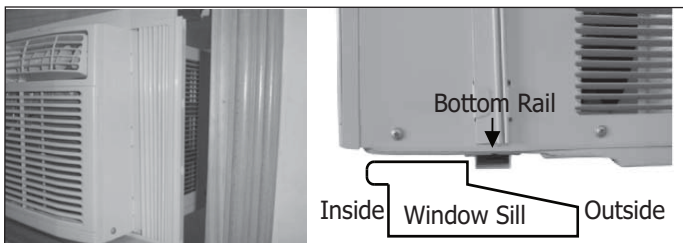
**Figure 2-4.**

- C. Once the panel has been installed on the side of the cabinet, make sure it sits securely inside the frame channel by making slight adjustments. Slide the top and bottom ends of the frame into the top and bottom rails of the cabinet.
- D. Slide the panel all the way in and repeat on the other side.

### **NOTE**

If storm window blocks AC, see Figure 2-9.

- 2. Keep a firm grip on air conditioner, then carefully place the unit into window opening so the bottom of the air conditioner frame is against the window sill (See Figure 2-5). Carefully close the window behind the top rail of the unit.



**Figure 2-5.**

- 3. Extend the side panels out against the window frame (See Figure 2-6).
- 4. Place the frame lock between the frame extensions and the window sill as shown (See Figure 2-6). Drive 3/4" (19 mm) locking screws through the frame lock and into the sill (See Figure 2-6).

### **NOTE**

To prevent window sill from splitting, drill 1/8" (3 mm) pilot holes for screws



**Figure 2-6.**

- 5. Drive 1/2" (13 mm) locking screws through frame holes into window sash (See Figure 2-7).



**Figure 2-7.**

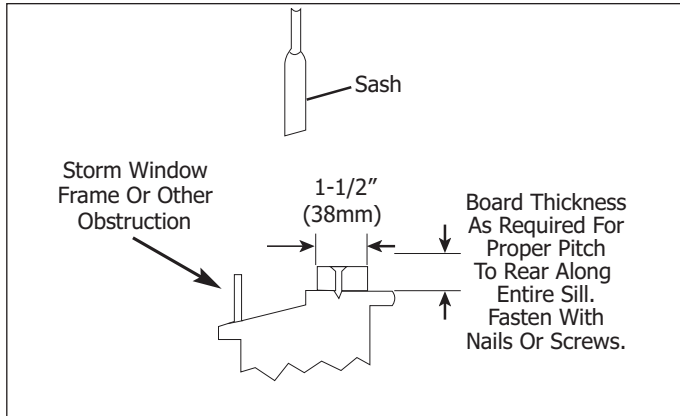
- 6. To secure lower sash in place, attach right angle sash lock with 3/4" (19 mm) screw as shown (See Figure 2-8).
- 7. Cut foam seal and insert in the space between the upper and lower sashes.



**Figure 2-8.**

### If AC Unit is Blocked by Storm Window

Add wood as shown in Figure 2-9, or remove storm window before air conditioner is installed.



**Figure 2-9.**

If storm window frame must remain, be sure the drain holes or slots are not caulked or painted shut. Accumulated rain water or condensation must be allowed to drain out.

### Removing AC Unit From Window

1. Turn AC unit off and disconnect power cord.
2. Remove sash seal from between windows, and unscrew sash lock.
3. Remove screws installed through frame and frame lock.
4. Close (slide) side panels into frame.
5. Keeping a firm grip on air conditioner; raise sash and carefully rock air conditioner backward to drain any condensate water in base of unit. Be careful not to spill any remaining water while lifting unit from window. Store parts with air conditioner.

## Section 2 Installation

### Installation Instructions For Heavy Duty (FAS Models) and Median (FAM Models) Air Conditioners

#### Tools Required

1. Large flat blade screwdriver
2. Tape measure
3. Adjustable wrench or pliers
4. Pencil
5. Level
6. Socket wrenches
7. Phillips screwdriver

Please read ALL instructions before installing. Two people are recommended to install this product. If a new electrical outlet is required, have the outlet installed by a qualified electrician before installing unit. See #5 in Preliminary Instructions following.

#### Preliminary Instructions

Check dimensions of your unit to determine model type:

#### Heavy duty (FAS) Median (FAM)

Unit Height:	18-5/8"	17-5/8"
Unit Width:	26-1/2"	23-1/2"
Min. Window Opening:	19"	18-1/2"
Min. Window Width:	31"	26-1/2"
Max. Window Width:	43"	40-1/2"

1. **Check window opening size.** The mounting parts furnished with this air conditioner are made to install in a wooden sill double-hung window. The standard parts are for window dimensions listed above. Open sash to a minimum of 19" (483mm).
2. **Check condition of window.** All wood parts of window must be in good shape and able to firmly hold the needed screws. If not, make repairs before installing unit.
3. **Check your storm windows.** If the storm window frame does not allow the clearance required, correct by adding a piece of wood as shown in Figure 2-10, or by removing storm window while room air conditioner is being installed.
4. **Check for anything that could block airflow.** Check area outside of window for things such as shrubs, trees, or awnings. Inside, be sure furniture, drapes, or blinds will not stop proper air flow.

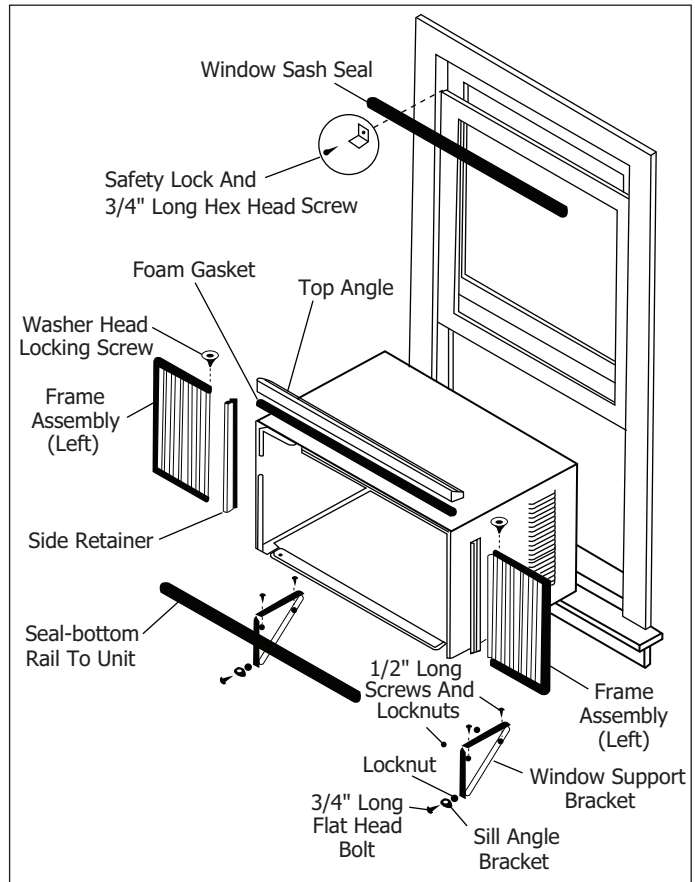


Figure 2-10.

#### Hardware (in plastic bag)








	Washer Head Locking Screw For window panels	Qty. 2		3/4" Long Flat Head Bolt and Locknut	Qty. 2 ea.
	3/4" Long Hex-Head Screw	Qty. 3		Sill Angle Bracket	Qty. 2
	Safety Lock	Qty. 1		1/2" Long Screw and locknut	Qty. 4 ea.
	Long hex-head locking screw for top angle, side retainer 5/16" Long	Qty. 10			

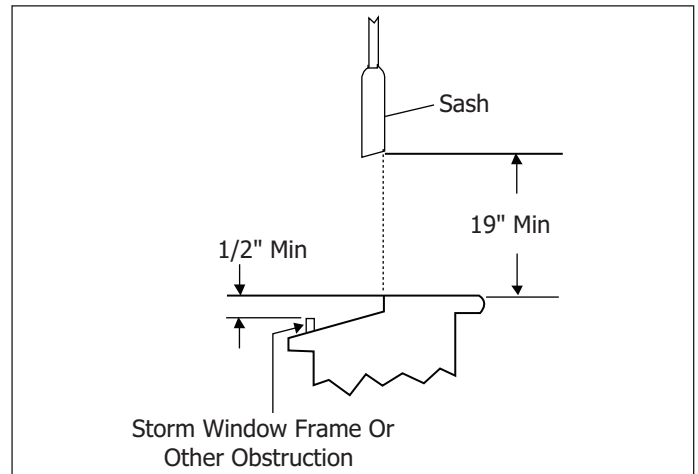
Figure 2-11.

## Section 2 Installation

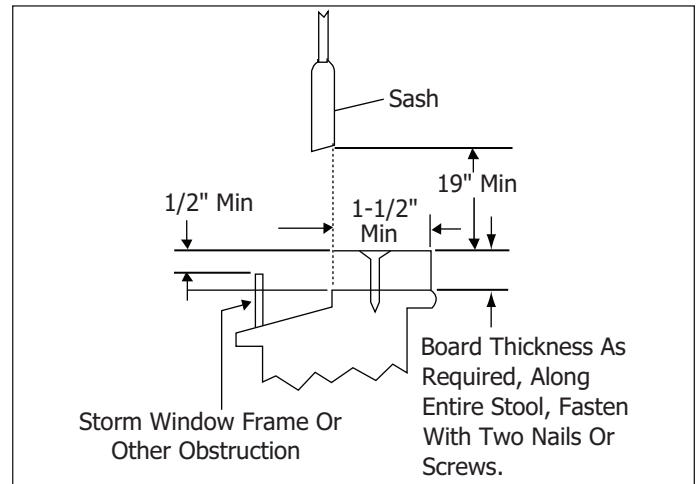
5. **Check the available electrical service.** Power supply must be the same as that shown on the unit serial nameplate. Power cord is 48" long. Be sure you have an outlet that is in reach of the power cord.

All models have a 3-prong service plug to provide proper service and safe positive grounding. Do not change plug in any way. Do not use an adapter plug. If the present wall outlet does not match the plug, have a qualified electrician make the needed change.

6. **Carefully unpack air conditioner.** Remove all packing material. Protect floor or carpet from damage. Two people should be used to move and install unit.



**Figure 2-12.**



**Figure 2-13.**

### **WARNING**

Avoid fire hazard or electric shock.  
Do not use an extension cord or an adaptor plug.  
Do not remove any prong from power cord.

Grounding type wall receptacle.

Do not, under any circumstances, cut, remove, or bypass grounding prong.



Power supply cord with 3-prong grounding plug and current detection device.

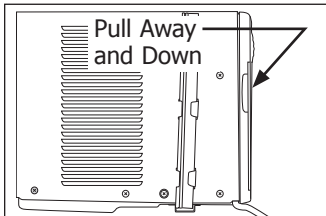


## Section 2 Installation

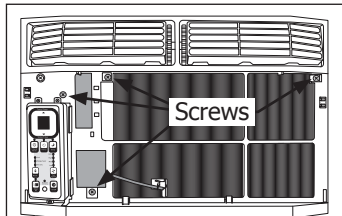
### Window Mounting

#### Remove Chassis

1. Pull down front grille panel and remove filter. (See Figure 2-14).
2. Lift front panel upwards and remove.

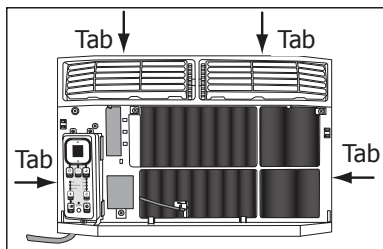


**Figure 2-14.**



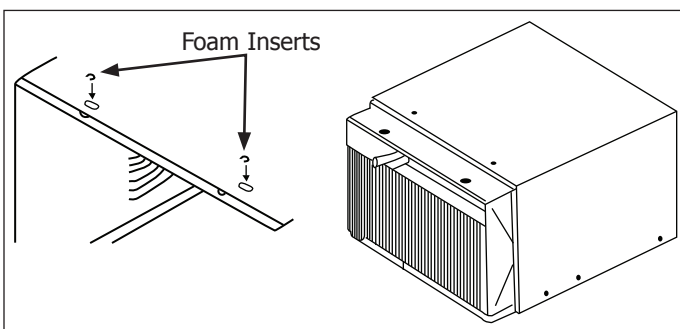
**Figure 2-15.**

3. Extract the 4 front panel screws. (See Figure 2-15)
4. Pry away front panel from cabinet sides. (See Figure 2-16)
5. Gently lift front off unit and place to one side.



**Figure 2-16.**

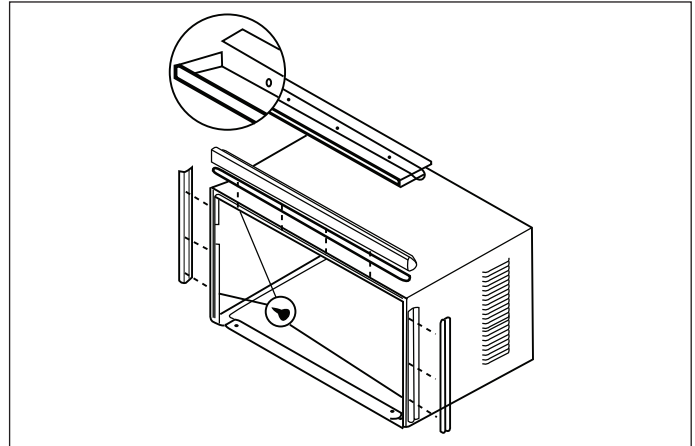
6. Remove shipping screws from top of unit and also on the side by the base if installed.
7. Hold the cabinet while pulling on the base handle, and carefully remove the unit.
8. Add two foam inserts to holes in top of cabinet where shipping screws were removed from. (See Figure 2-17)
9. Your unit may come with internal packaging by the compressor and condenser fan assembly. This packaging must be removed prior to installing the air conditioner back into the cabinet. (See Figure 2-17)



**Figure 2-17.**

#### Install Top Angle and Side Bracket

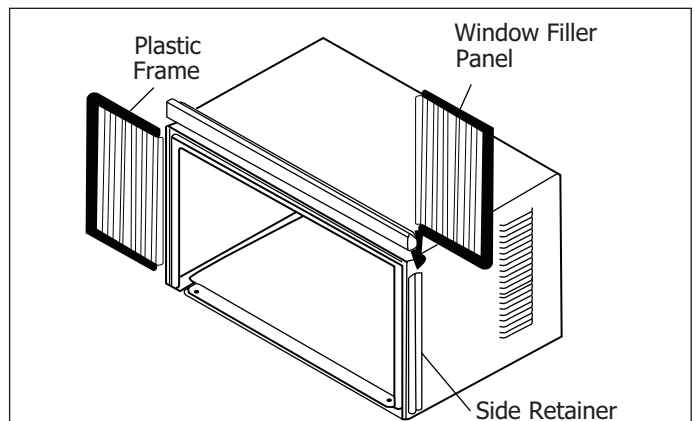
1. Attach foam gasket to top angle above holes as shown in Figure 2-18.
2. Install top angle and side retainers to cabinet as shown in Figure 2-18.



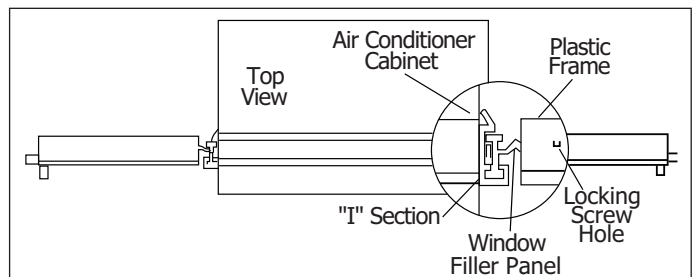
**Figure 2-18.**

#### Assemble Window Filler Panels

1. Place cabinet on floor, a bench, or a table.
2. Slide "I" section of window filler panel into side retainer on the side of the cabinet (See Figures 2-19 and 2-20). Do both sides.



**Figure 2-19.**



**Figure 2-20.**

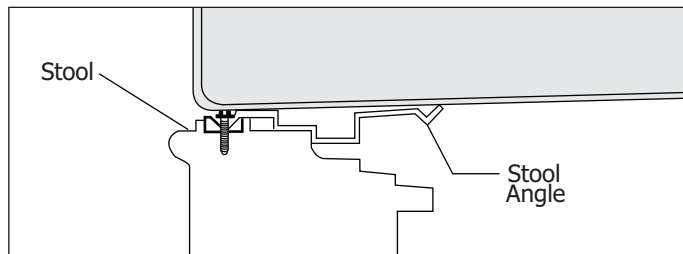


## Section 2 Installation

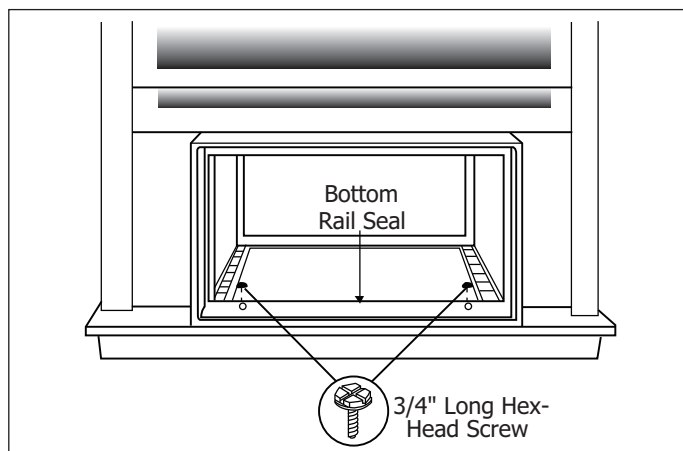
3. Insert top and bottom legs of window filler panel frame into channel in the top angle and bottom rail. Do both sides.
4. Insert washer head locking screws (2) into holes in top leg of filler panel frame. Do not totally tighten. Allow leg to slide freely. (See Figure 2-20)

### Place Cabinet in Window

1. Open window and mark center of window stool.
2. Place cabinet in window with bottom stool angle firmly seated over window stool as shown. Bring window down temporarily behind top angle to hold cabinet in place.
3. Shift cabinet left or right as needed to line up center of cabinet on center line marked on stool.
4. Fasten cabinet to window stool with 2 screws into holes. (You may wish to pre-drill pilot holes.) (See Figures 2-21 & 2-22)
5. Add bottom rail seal over screws to window stool.



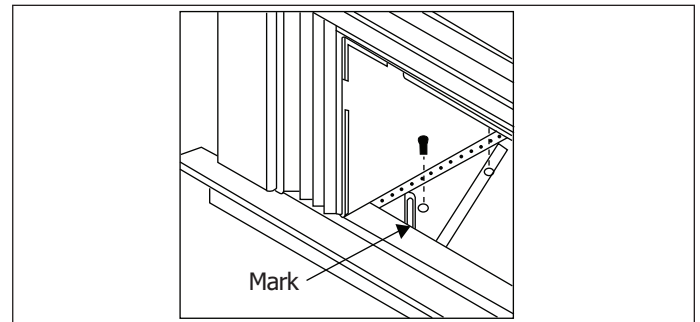
**Figure 2-21.**



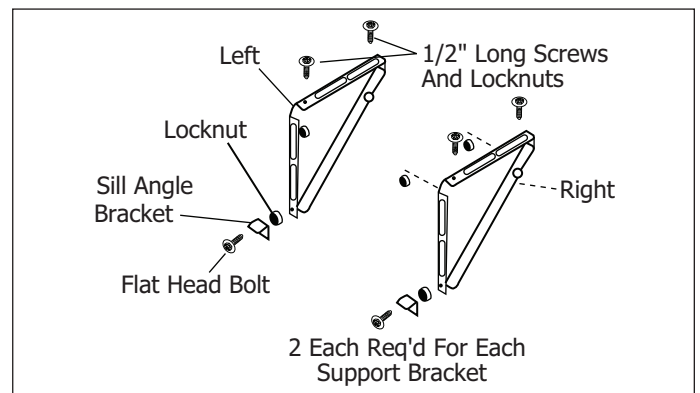
**Figure 2-22.**

### Install Support Bracket

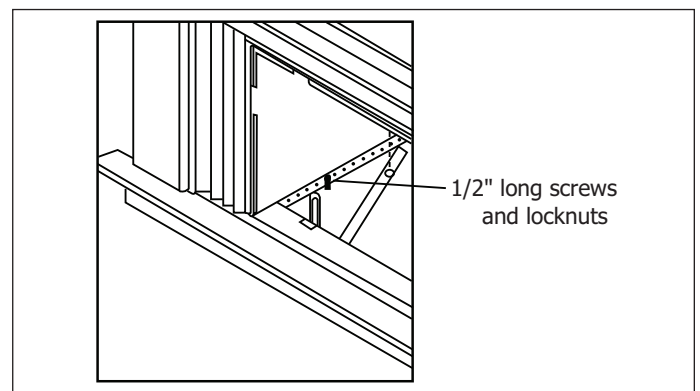
1. Hold each support bracket flush against outside of sill and tight to bottom of cabinet as shown below. Mark brackets at top level of sill, then remove. (See Figure 2-23)
2. Assemble sill angle bracket to support brackets at the marked position, as shown. Hand tighten, but allow for any changes later. (See Figure 2-24)
3. Install support brackets (with sill angle brackets attached) to correct hole in bottom of cabinet as shown. (See Figure 2-25)
4. Tighten all 6 bolts securely.



**Figure 2-23.**



**Figure 2-24.**



**Figure 2-25.**

## Section 2 Installation

### Extend Window Filler Panels

1. Carefully raise window to expose filler panel locking screws. Loosen screws so filler panels slide easily.
2. Extend panels to completely fill window opening. Tighten locking screws on top. (See Figure 2-26)
3. Close window behind top angle.

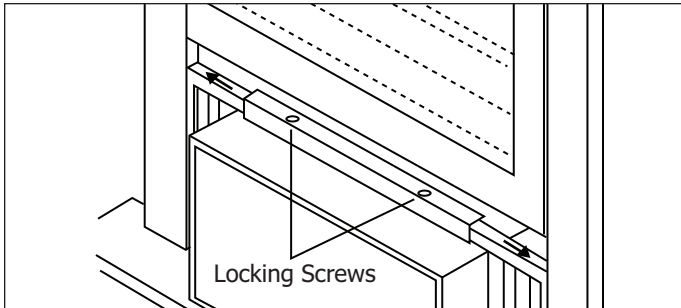


Figure 2-26.

### Install Window Lock and Sash Seal

1. Trim sash seal to fit window width. Insert into space between upper and lower sashes.
2. Attach right angle safety lock as shown. (See Figure 2-27)

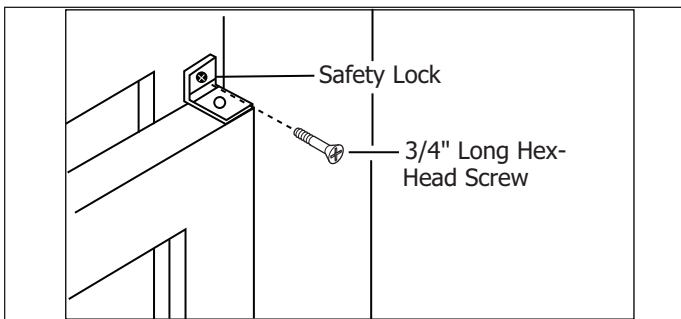


Figure 2-27.

### Install Chassis into Cabinet and Install Front to Unit

1. Lift air conditioner and carefully slide into cabinet leaving 6" protruding.



#### CAUTION

DO NOT push on controls or finned coils.

2. Be sure chassis is firmly seated towards rear of cabinet.
3. Installation of front is the reverse of removal.

### Thru-The-Wall Installation

#### Select Wall Location

Consult local building codes prior to installation. This air conditioner has a slide-out chassis, so that it can be installed through an outside wall as specified below:

	Heavy Duty (FAS)	Median (FAM)
Max wall thickness:	12"	10"



#### IMPORTANT

Side louvers must never be blocked.

All parts needed for Thru-The-Wall Installation are provided, except a wood frame, shims, and 10 wood screws (#10-1" long minimum).

Select a wall surface that has the 5 conditions below:

1. Does not support major structural loads such as the frame.
2. Does not have plumbing or wiring inside.
3. Is near existing electrical outlets, or where another outlet can be installed.
4. Is not blocked and faces the area to be cooled.
5. Allows unblocked airflow from rear sides and end (outside).

#### Prepare Wall

1. Prepare wall in frame construction (including brick and stucco veneer). Working from inside the room, find wall stud nearest the center of area where air conditioner will be installed (by sounding wall, or by magnetically finding nails).
2. Cut or knock out a hole on each side of center stud.
3. Measure between inside edges of every other stud as shown. (See Figure 2-28)

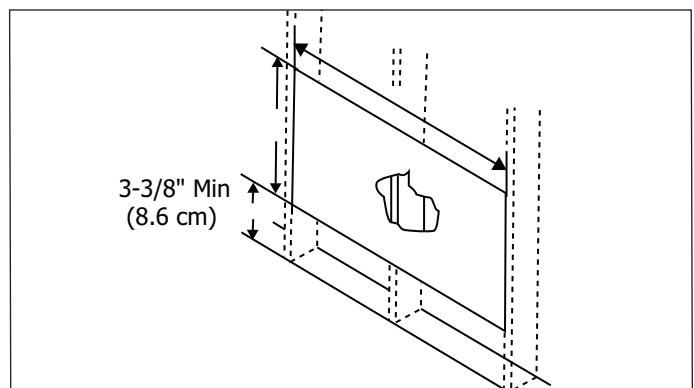


Figure 2-28.

## Section 2 Installation

Carefully measure and cut an opening with the following dimensions depending on your model. (See Figure 2-29)

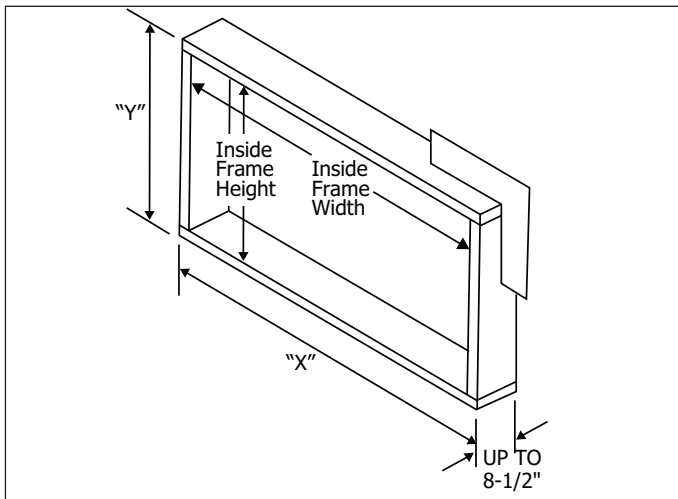
WIDTH "X" = inside model width plus twice the thickness of framing material used.

HEIGHT "Y" = inside model height plus twice the thickness of framing material used.

### Heavy Duty (FAS) Median (FAM)

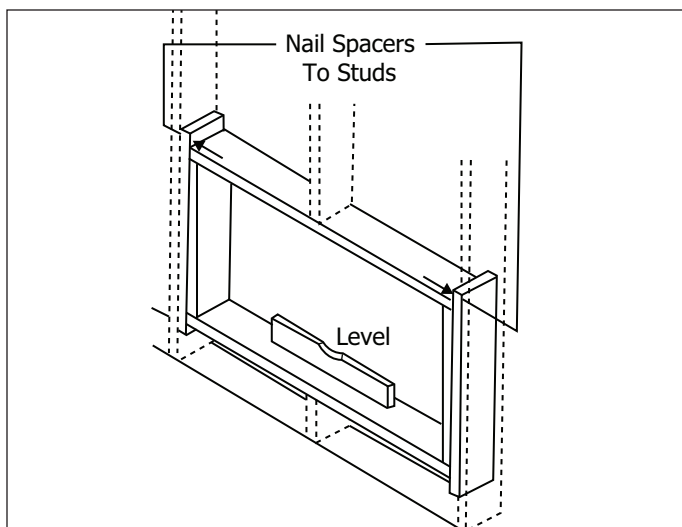
Inside Frame Height: 18-7/8" (47.9cm) 18" (45.7cm)

Inside Frame Width: 26-3/4" (67.9cm) 23-7/8" (60.6cm)



**Figure 2-29.**

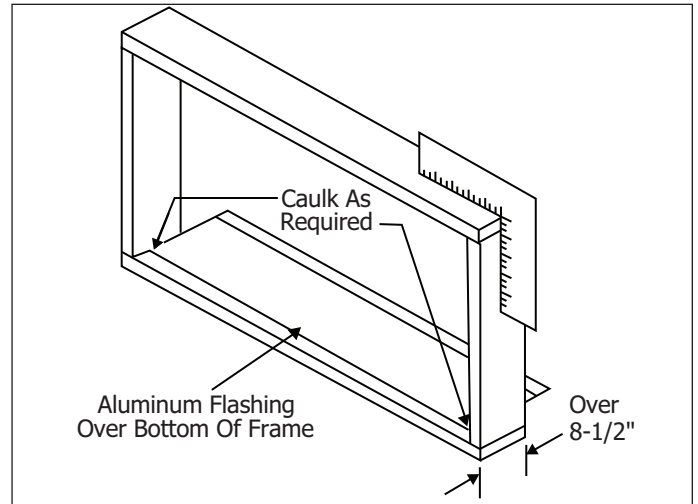
4. Build a wooden frame with the INSIDE dimensions of your model listed above. Frame depth should be the same as wall thickness. Fill in the space from the opening to the studs with wood spacers, as shown.
5. Nail frame to spacers with front flush to the dry wall. (See Figure 2-30)



**Figure 2-30.**

### NOTE

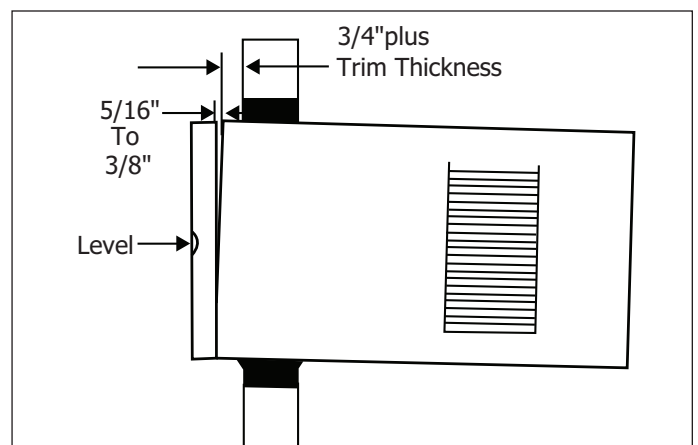
If wall thickness is 8-1/2 inches or more, add aluminum flashing over bottom of frame opening to assure no water can enter area between inner and outer wall.



**Figure 2-31.**

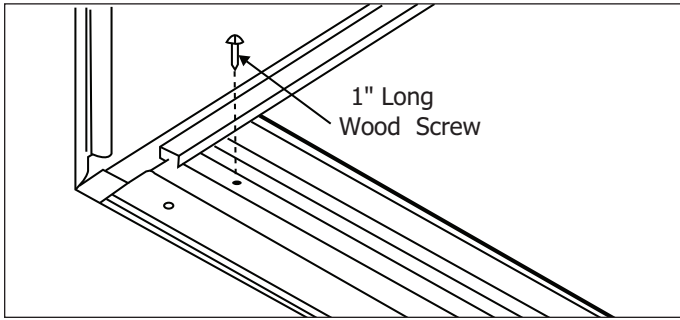
### Prepare and Install Cabinet

1. Slide chassis from cabinet. Refer back to Step 1 of Window Mounting.
2. Place cabinet into opening with bottom rail resting firmly on bottom board of wooden frame.
3. Position cabinet to achieve proper slope for water removal. (See Figure 2-32)
4. Secure bottom rail to wood frame with two large wood screws 1" (2.5 cm) long using the two holes in the bottom of the channel resting on frame. (See Figure 2-32)



**Figure 2-32.**

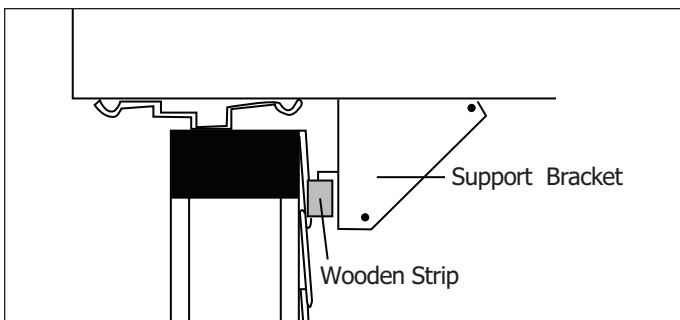
## Section 2 Installation



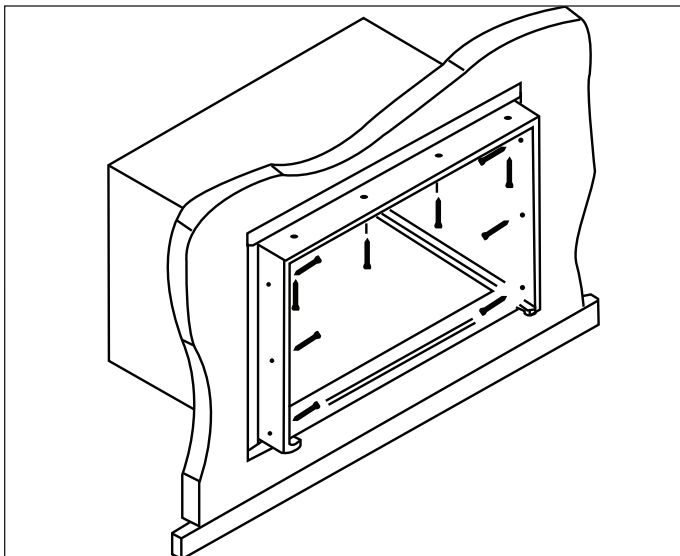
**Figure 2-33.**

Refer to Install Support Bracket for assembly of support brackets. A wooden strip nailed to the outside wall should be used in conjunction with sill support angle brackets. (See Figure 2-34)

5. Screw or nail cabinet wooden frame, using shims if frame is oversized to eliminate distortion. Remember to maintain proper slope of air conditioner.



**Figure 2-34.**



**Figure 2-35.**

**OPTIONAL:** Caulking and installation of trim on interior wall may be done. You can buy wood from your local lumber or hardware supply. On the outside, caulk openings around top and sides of cabinet, and all sides of wood sleeve to the opening.

### Masonry Construction

1. Cut or build a wall opening in the masonry wall similar to the frame construction (refer to Thru-the-Wall Installation for a wall thickness greater than 8-1/2 inches).
2. Secure cabinet in place using masonry nails, or the correct masonry anchor screws. (Another way to do this is to build an in-between frame of 2X4's as shown in Prepare Wall illustrations - but make it double framed on either side, and install between masonry wall opening and cabinet. Frame must be securely anchored to masonry wall opening) This way gives very good louver clearance on either side of cabinet.
3. Install a lintel to support masonry wall above cabinet. Existing holes in cabinet can be used and/or additional holes can be drilled to fasten cabinet at various positions. Be sure that side louver clearance is in accordance with Step 1 above.
4. Install exterior cabinet support brackets as shown in Step 2 of Thru-the-Wall Installation. Caulk or flash if needed to provide a weather-tight seal around top and sides of cabinet.
5. To complete installation, apply wood trim molding around room side projection of cabinet.

### Installation Instructions For Slider Casement Air Conditioners

These instructions describe installation in a typical wood framed window with a wood slide-by sash, or installation in a metal casement window. Modification may be necessary when installing in windows made differently than those shown in these instructions.

A high window accessory kit (Part# EA103W) is available for window heights up to 62" (1575mm).

### Meeting Electrical Requirements

Observe all local governing codes and ordinances. Do not, under any circumstances, remove the power supply cord grounding prong.



#### **WARNING**

**ELECTRICAL GROUND IS REQUIRED FOR THIS APPLIANCE.**

**DO NOT GROUND TO A GAS LINE.**

**IF COLD WATER PIPE IS INTERRUPTED BY PLASTIC, NON-METAL GASKETS, OR OTHER INSULATING MATERIALS, DO NOT USE FOR GROUNDING.**

**CHECK WITH A QUALIFIED ELECTRICIAN IF THERE IS DOUBT ABOUT THE APPLIANCE BEING PROPERLY GROUNDED.**

**DO NOT MODIFY THE POWER SUPPLY PLUG. IF THE POWER SUPPLY OUTLET IS WRONG, HAVE ONE INSTALLED BY A QUALIFIED ELECTRICIAN.**

**DO NOT HAVE A FUSE IN THE NEUTRAL OR GROUNDING CIRCUIT. A FUSE IN THE NEUTRAL OR GROUND CIRCUIT COULD RESULT IN ELECTRICAL SHOCK.**

**DO NOT USE AN EXTENSION CORD WITH THIS APPLIANCE.**

**FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN ELECTRICAL SHOCK, SERIOUS INJURY OR DEATH.**



#### **NOTE**

If codes permit, and a separate grounding wire is used, it is recommended that a qualified electrician determine that the grounding path is adequate and not interrupted by plastic, non-metallic gaskets, or other insulating materials.

### Receptacle Wiring

Receptacle wiring should be a minimum of 14 gauge. Use copper wire only. If a mating 3-prong grounding-type wall receptacle is not available, it is the responsibility of the consumer to have a properly grounded 3-prong wall receptacle installed by a qualified electrician.

### Electrical Requirements

A 115 volt (103.5V minimum, 126.5V maximum), 60 Hertz, AC only, 15 ampere fused electrical supply is required. A time delay fuse or time delay circuit breaker is also required. A separate circuit, serving only this appliance, MUST be provided by the customer.

### Recommended Grounding Method

For your personal safety, this appliance must be grounded. The air conditioner includes a power supply cord with a 3-prong grounding plug.

To minimize possible electrical shock hazard:

1. Cord must be plugged into a mating 3-prong grounding-type wall receptacle,
2. Must be grounded in accordance with National Electrical Code (ANSI/NFPA 70- latest version) and
3. All local codes and ordinances must be followed.

## Section 2 Installation

### Preparing for Installation

#### Installation Tips

For wood-frame casement windows:

It may be necessary to construct a frame, using at least 1-inch thick wood, with a 15-1/2-inch wide opening.

For brick or cement building construction:

It may be necessary to put a wood stool strip under AC, for mounting purposes.

#### Tools Required

1. Flat-head screwdriver
2. Phillips-head screwdriver
3. Carpenter's level
4. Tape measure
5. Fine tooth saw
6. Electric or hand drill
7. Knife and scissors
8. Pencil

### WARNING

**FAILURE TO ADHERE TO THE FOLLOWING PRECAUTIONS COULD RESULT IN PERSONAL INJURY AND PRODUCT DAMAGE.**

**BECAUSE THIS UNIT WEIGHS ABOUT 88 TO 105 POUNDS, IT IS RECOMMENDED THAT 2 PEOPLE INSTALL THE AC UNIT, AND THAT YOU BOTH USE PROPER LIFTING TECHNIQUES. INSPECT THE CONDITION OF THE WINDOW WHERE UNIT WILL BE INSTALLED. BE SURE IT WILL SUPPORT THE WEIGHT OF THE UNIT.**

**THIS APPLIANCE MUST BE INSTALLED ACCORDING TO ALL APPLICABLE CODES AND ORDINANCES.**

**HANDLE AC UNIT WITH CARE. AVOID SHARP METAL FINS ON FRONT AND REAR COILS. MAKE SURE YOUR AC DOES NOT FALL DURING INSTALLATION.**

**DO NOT USE WATER COLLECTED IN THE UNIT FOR DRINKING PURPOSES. IT IS NOT SANITARY.**

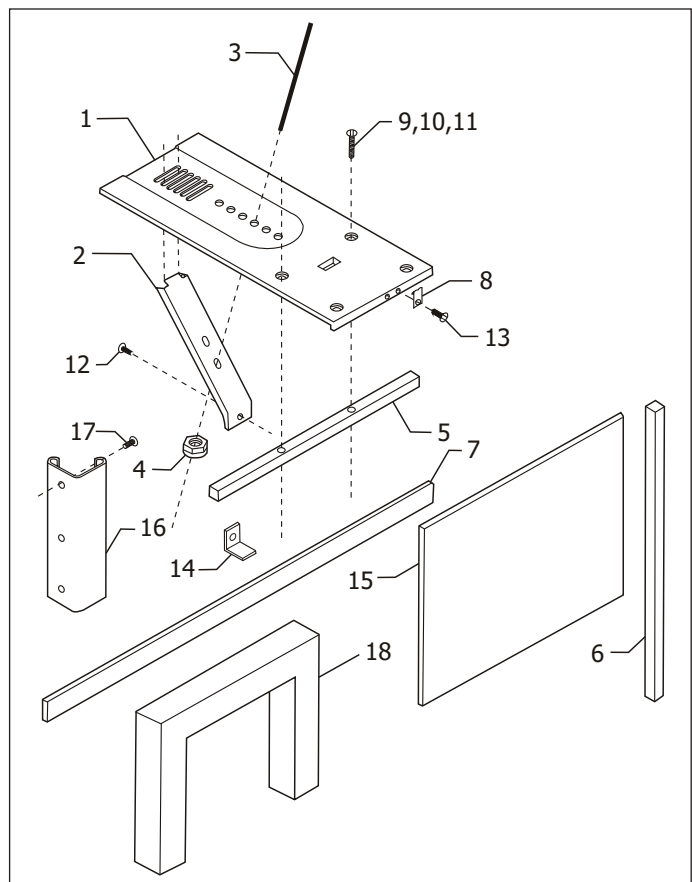
### NOTE

Only use screws specified in these instructions.

### A. Make sure you have all the necessary parts.

Installation kit contents:

1. Platform (1)
2. Support brace (1)
3. Adjustment bolt (1)
4. Hex flange nut - 1/4" (1)
5. Track seal (1)
6. Side channel seal (1)
7. Foam seal strip/Sash seal
8. Safety bracket (1)
- 9-11. Screw - #10 x 2-1/2 flat-head (2), OR  
Screw - #10 x 1-3/4" pan-head (2), OR  
Screw - #10 x 1" pan-head (2)
12. Screw - #8 x 3/4" pan head (6)
13. Screw - #8 x 3/4" self-threading (7)
14. Window locking bracket (1)
15. Plastic window panel (1)
16. Side channel (2)
17. Screw - #8 x 3/8" truss head (6)
18. Panel frame/seal assembly (1)



**Figure 2-36.**

## Section 2 Installation

### B. Choose a proper sized window.

1. 15-1/2 inches minimum width
2. 16-1/4 inches maximum width (casement windows)
3. 21-1/4 inches minimum height (with window panel retainer)
4. 20-5/16 inches minimum height (window panel retainer removed)
5. 39-7/16 inches maximum height

#### NOTE

Height measurement must be of a clear opening above mounting platform. In some cases, due to a variety of stop and track arrangements, the above dimensions may vary slightly. If necessary, installation can be made by alternating window jambs. (See Alternate Window Jamb Applications.)

### C. Choose the proper window location.

Choose a window that allows the cooled air to flow freely and directly into room(s) you wish to cool. Remember, it is difficult to move air around corners. Also, choose a window that is within 6 feet of an electrical outlet. Do not use an extension cord.

### Installing Unit in a Sliding Window

1. Attach support brace to platform as shown. Use adjustment bolt and hex flange nut to complete assembly. Choose slot and adjustment bolt hole locations that will create a 45 degree angle between platform and support brace. Try assembly in the window to determine if platform will rest properly, and allow proper slope (3/16-inch lower on outside).

#### NOTE

If you are planning to use a siding protection board on the outside of house, hold board in place when testing assembly in window.

2. Measure, and lightly mark a line 8-11/16 inches from window jamb.

#### NOTE

If any sash stop protrudes more than 1 inch from the side window jambs, the 8-11/16-inch measurement must be increased accordingly. Screen and storm window frames may also require adjustments to the measurement.

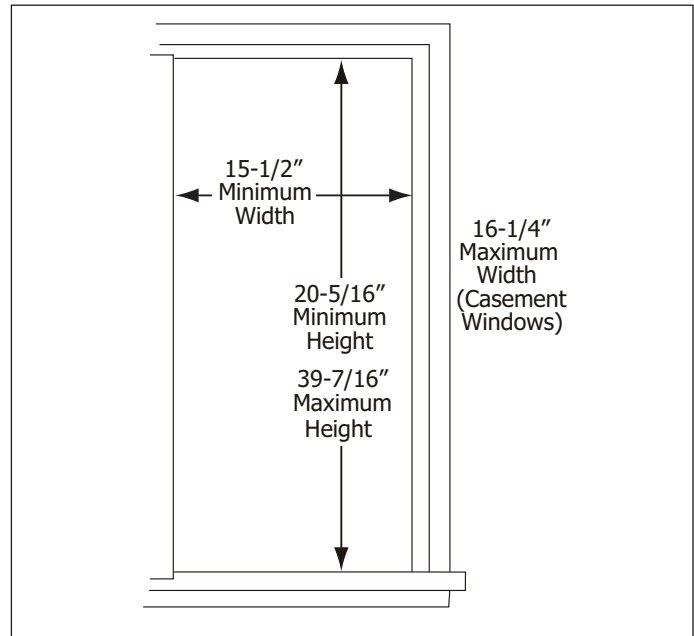


Figure 2-37.

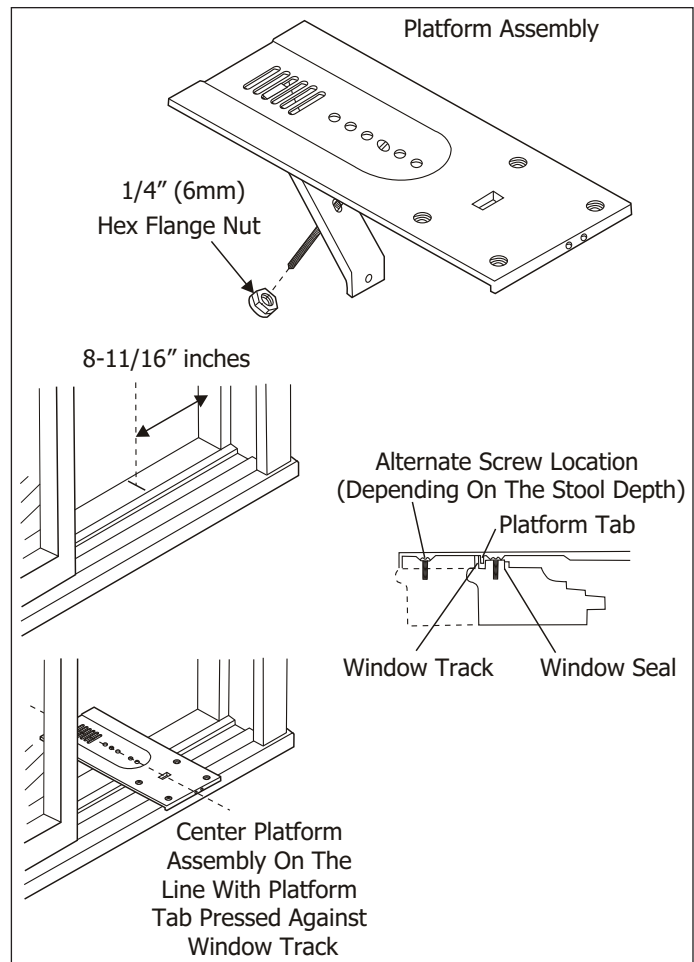


Figure 2-38.



## Section 2 Installation

3. Center platform assembly on the line with inside platform tab pressed against inside edge of window track. Using the holes in the platform as a guide, mark and drill two 9/64-inch diameter holes. Drill holes in either track or stool.

### NOTE

Property Damage Hazard - Failure to adhere to the following precaution could result in damage to window or air conditioner. Be sure wood stool or window track is securely attached to the building construction. Use longer screws in sub-framing if necessary.

4. Peel off protective backing from track seal. Apply seal to room side of window track. Center of seal strip should coincide with line marked in Step 2. The two screw holes drilled in Step 3 should be directly above seal strip in the inner track. (See Figure 2-39)
5. Securely attach a siding-protection board to side of house. (See Figure 2-40)

### NOTE

Siding-protection board should be long enough to span 2 wall studs.

6. Place platform assembly, with platform tab against inside of window track, and attach it to window jamb. Use appropriate length screws (Items 9-11 in Preparing For Installation).
7. Adjust platform assembly so that outside edge is 3/16-inch lower than inside edge (See Figure 2-41). This ensures proper water drainage from the air conditioner.
8. Level platform assembly from side-to-side. Also, make sure window track is level. Use leveling shims as necessary to ensure unit is level from side-to-side.
9. Measure height of window opening from top of platform assembly as shown right. Subtract 20-5/8 inches. Mark this measurement on plastic window panel along the longer side. (See Figure 2-42)

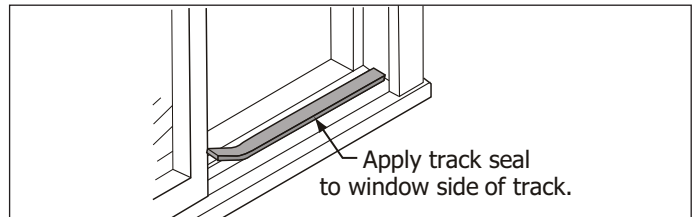


Figure 2-39.

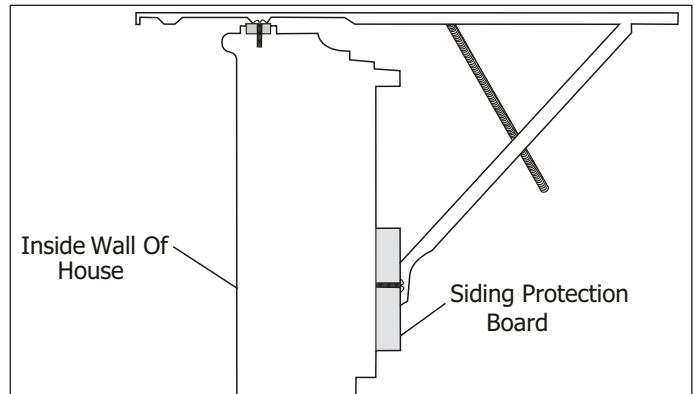


Figure 2-40.

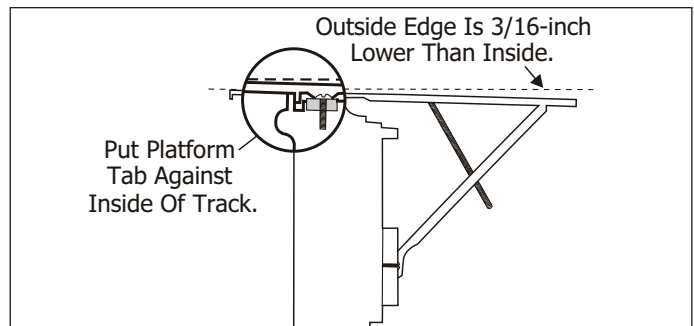


Figure 2-41.

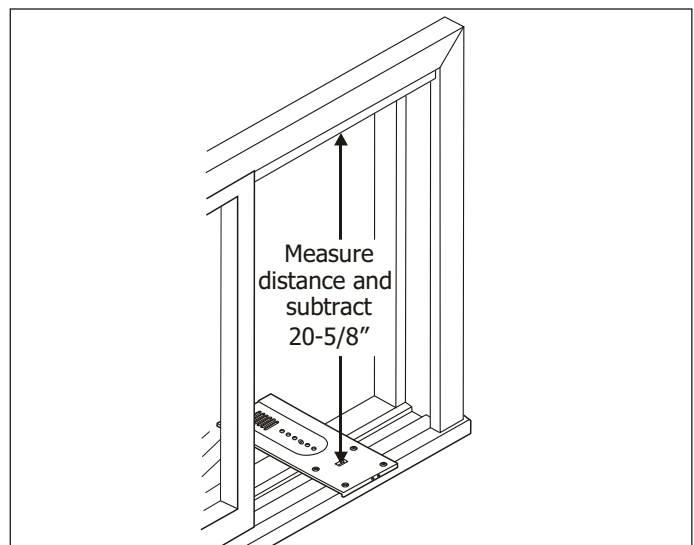


Figure 2-42.



## Section 2 Installation

10. Clamp plastic window panel between a board and a work table, and cut along cutting line with a fine tooth saw. Remove any burrs with a file.
11. Fasten side channels to the sides of the AC using 3 screws (Item 17) per channel. Start with first screw at top of channel. Make sure hook ends of channels face toward back of unit.
12. Slide plastic window panel into panel frame, with the smooth side to the room. Slide panel frame assembly into side channels of the AC cabinet. Make sure plastic window panel is firmly enclosed on all sides by the retainer grooves. (See Figure 2-43)
13. Cut side channel seal into 2 equal lengths. Remove protective backing and apply it to the rear side of cabinet side channels starting just below panel frame assembly. Pinch off excess length so seal is even with the bottom of the cabinet side channel. (See Figure 2-44)
14. To remove front:
  - a. Remove the two front retaining screws from the front frame. (See Figure 2-45)
  - b. Press firmly on each side of the metal case close to the front, approximately 2/3 of the way down.
  - c. While pressing on the sides of the metal case, gently pull the front out and lift up to release it from the case.
  - d. Then release the electrical coupler plug.



### NOTE

DO NOT push or pull air direction louvers.

15. Place AC in window opening. The unit should sit on the platform assembly so that window panel frame and cabinet side channels are against top and side window jambs.
16. Slide inner window sash firmly against side of the cabinet. Make sure not to peel the seal strips from the window track and cabinet side channels. If the panel frame does not fit snugly to the inner window sash, secure the panel frame to the sash with #8 x 3/4 inch screws, or #8-32 x 3/4 inch self-threading screws. Use the partially plugged holes in the panel frame. Drill 1/8-inch pilot holes for the screws. (See Figure 2-46)

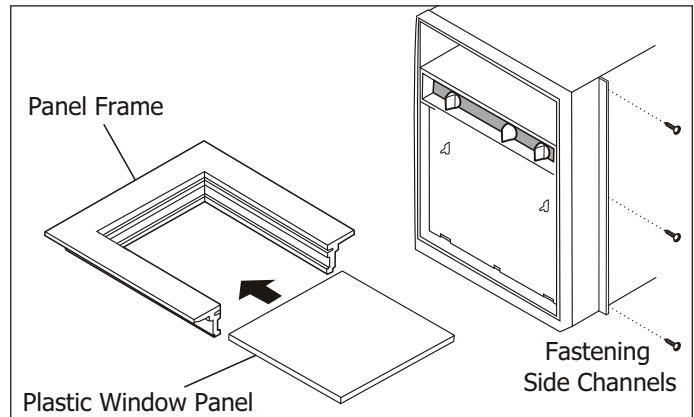


Figure 2-43.

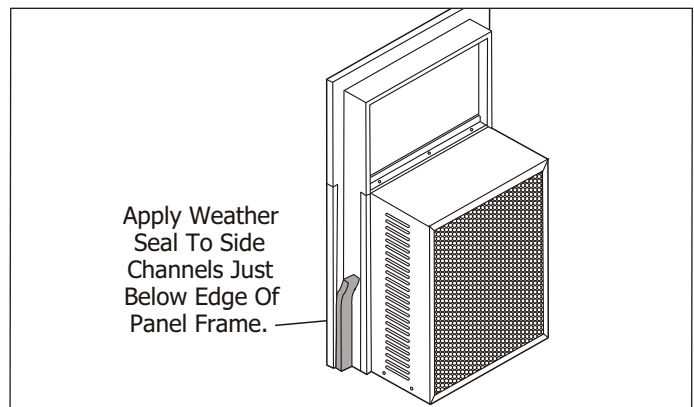


Figure 2-44.

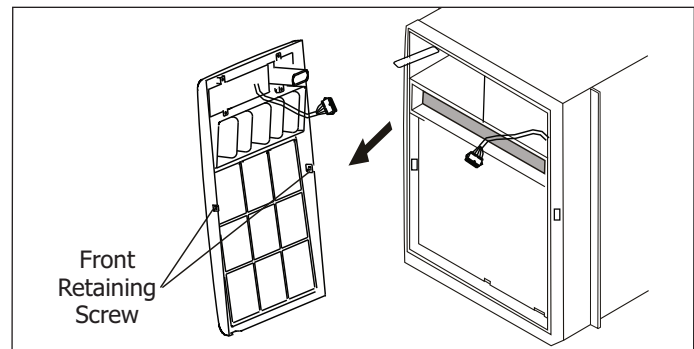


Figure 2-45.

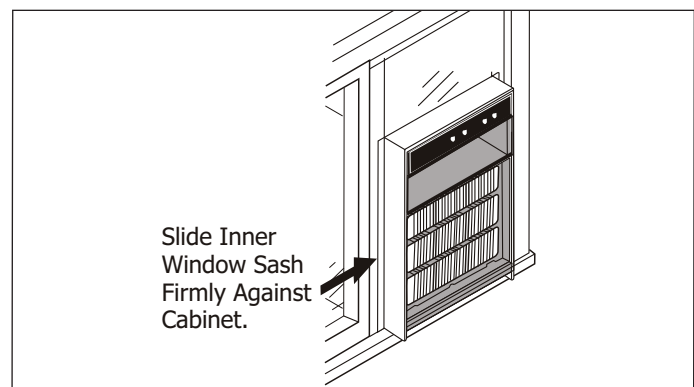


Figure 2-46.

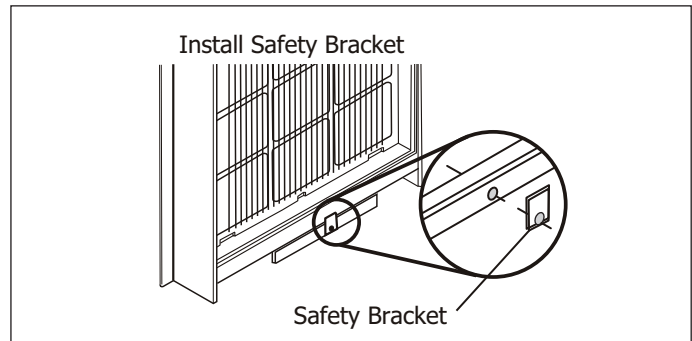
## Section 2 Installation

17. Hook the safety bracket over the base of the unit and fasten it to the front of the platform assembly. Use a #8-32 x 3/4-inch self-threading screw. (See Figure 2-47)

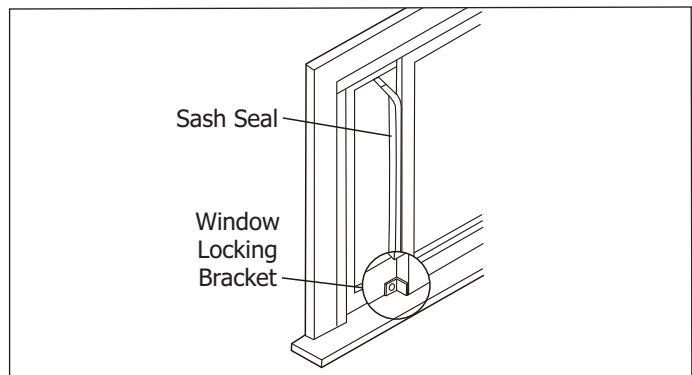
### NOTE

The bracket prevents movement of the air conditioner (either in or out) after completing the installation.

18. Stuff the foam seal strip/sash seal between the vertical sash and window glass (See Figure 2-48).
19. Use the window locking bracket to lock the inner window sash to the base of the outer window sash. Use one #8 x 3/4 inch screw, or #8-32 x 3/4 inch self-threading screw. (Drill 1/8-inch pilot hole).
20. To replace the front:  
First reconnect the coupler plugs, move the exhaust control positioned through the front to the proper location. Gently push the front into position on the cabinet. It should click into place. Then replace the retaining screws that holds the panel in place. Do not push or pull the front panel louvers.



**Figure 2-47.**

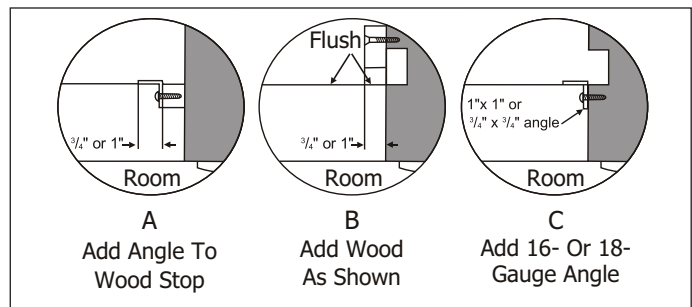


**Figure 2-48.**

### Alternate Window Jamb Applications

To install in windows having no flanges or wood stops on the top and side jambs, the channels and panel frame must fit against a mating flange (or 1/16-inch max. thick angle) attached to the window jambs.

Figure 2-49 illustration A shows this angle installed. Figure 2-49 illustrations B & C show alternate treatments. On the sash side of the opening, the leading corner of the inner sash becomes the flange. You can purchase the angle strip locally.



**Figure 2-49.**

### Installing the Unit in a Casement Window

#### NOTE

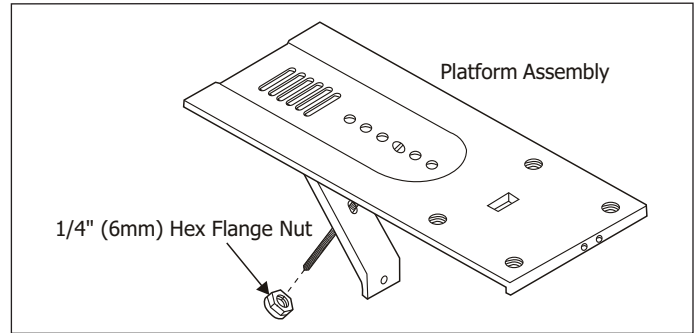
Open the window the maximum amount to allow for clearance of the cabinet. The crank handle should be removed to allow the platform to be fastened to the jamb. If the window cannot open far enough (more than 15-1/2 inches) for the cabinet to clear the window, remove the window entirely by drilling out the rivets. Bolts can serve as the pivots in the future. To avoid crank handle and window clearance problems, the unit can be installed in a stationary sash section. However, the horizontal mullion and the 2 glass panels must be removed before installation.

1. Attach support brace to platform as shown. Use the adjustment bolt and hex flange nut to complete the assembly. Choose the slot and adjustment bolt hole locations that will create a 45 degree angle between the platform and the support brace. Try the assembly in the window to determine if the platform will rest properly, and allow the proper slope (3/16-inch lower on outside). (See Figure 2-50)

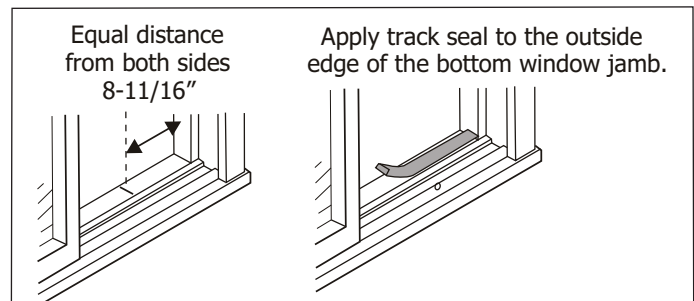
#### NOTE

If you are planning to use a siding protection board on the outside of house, hold board in place when testing assembly in window.

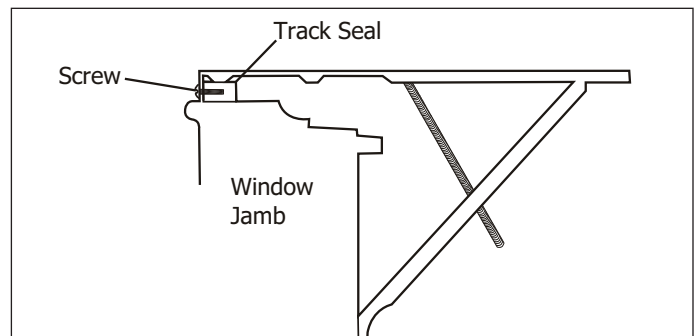
2. Drill a 9/64-inch diameter pilot hole in the window jamb an equal distance from each side of the jamb, and 3/16-inch up from the window sill. If the hole coincides with the window lever slot in the jamb bottom, an additional hole will have to be drilled through the platform edge and the window jamb to miss this slot.
3. Peel off the protective backing from the track seal, and stick the seal to the window sill on the outside of the bottom jamb. (See Figure 2-51)
4. Screw the platform assembly to the window jamb through the pilot hole you drilled in Step 2. Use a #8 x 3/4-inch self-threading screw. (See Figure 2-52)
5. Adjust the platform assembly so that the rear of the air conditioner will be 3/16-inch lower than the front. This ensures proper water drainage from the air conditioner. (See Figure 2-53)



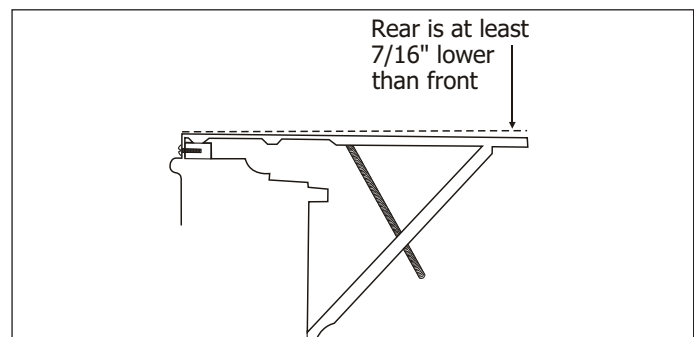
**Figure 2-50.**



**Figure 2-51.**



**Figure 2-52.**



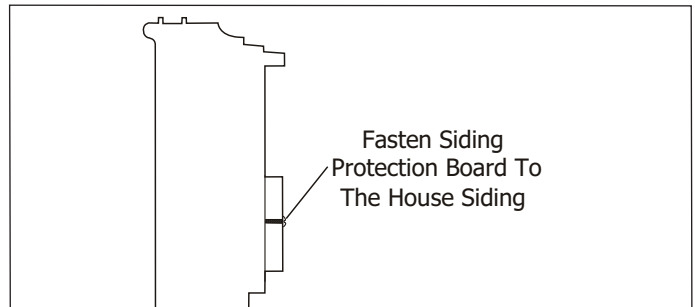
**Figure 2-53.**

#### NOTE

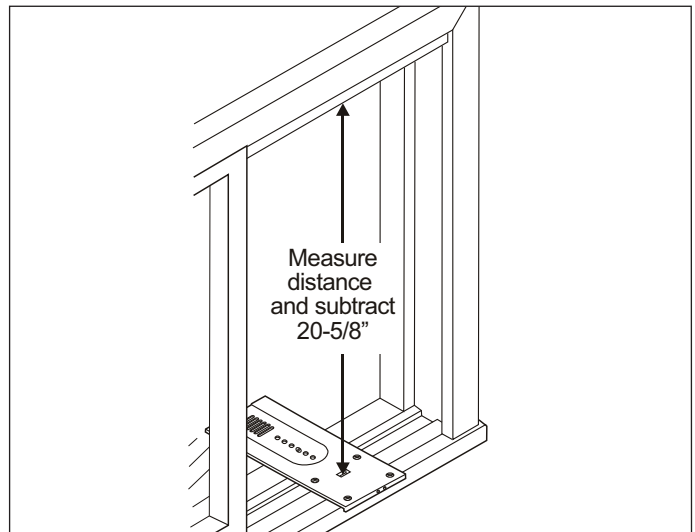
A projection below the base of the air conditioner will require the rear of the platform to be 7/16-inch lower than the front to create the 3/16-inch slant from front to rear.

## Section 2 Installation

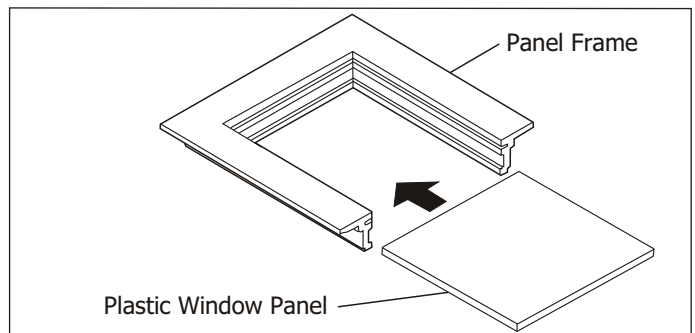
6. Securely attach a siding-protection board to the side of the house where the platform assembly hit the house. The siding-protection board should be long enough to span 2 wall studs. (See Figure 2-54)
7. Measure the height of the window opening from the top of the platform assembly. Subtract  $20\text{-}5/8"$ . Mark this measurement on the plastic window panel along the longer side. (See Figure 2-55)
8. Clamp the plastic window panel between a board and a work table, then cut along the line with a fine tooth saw. Remove any burrs with a file.
9. Fasten the side channels to the sides of the unit using three screws (Item 17) per channel. Make sure hook ends of channels face toward the back of unit.
10. Slide the plastic window panel into the panel frame with the smooth side to the outside. Slide the panel frame assembly into the side channels of the air conditioner cabinet. Make sure the plastic window panel is firmly enclosed on all sides by the retainer grooves. (See Figure 2-56)
11. Cut side channel seal into 2 equal lengths. Remove the protective backing and apply it to the rear side of the cabinet side channels, starting just below the panel frame assembly. Pinch off excess length so the seal is even with the bottom of the cabinet side channel. (See Figure 2-57)



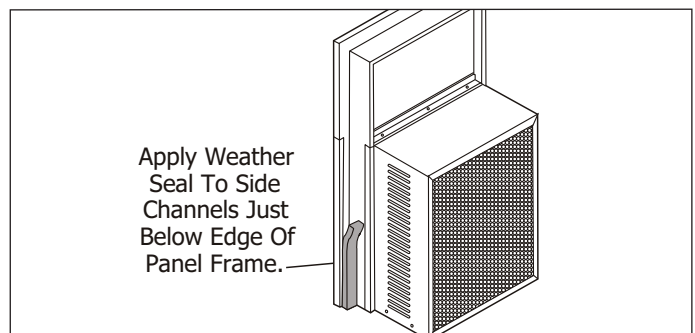
**Figure 2-54.**



**Figure 2-55.**



**Figure 2-56.**



**Figure 2-57.**

## Section 2 Installation

### 12. To remove front:

1. Remove the two front retaining screws from the front frame. (See Figure 2-58)
2. Press firmly on each side of the metal case close to the front approximately 2/3 of the way down.
3. While pressing on the sides of the metal case, gently pull the front out and lift up to release it from the case.
4. Disconnect the electrical coupler plug.

### NOTE

DO NOT push or pull air direction louvers.

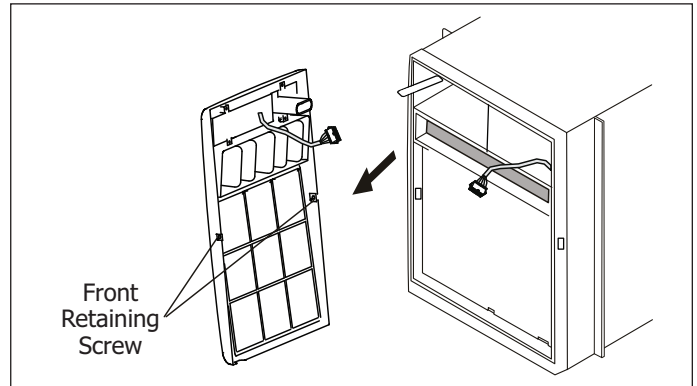


Figure 2-58.

13. Place the air conditioner in the window opening. It should sit on the platform assembly so that the window panel frame and the cabinet side channels are against the top and side window jambs. Side channels should overlap side window jambs equally.
14. Drill two 9/64-inch diameter pilot holes in the top window jamb in line with the partially plugged holes in the panel frame. Secure panel frame to window jamb with two #8-32 x 3/4-inch self-threading screws. If additional holding is necessary, two screws may be used on the sides of panel frame as well.
15. Drill two screw-clearance holes in the cabinet side channels (near bottom) and two 9/64-inch diameter pilot holes in the side window jambs. Secure the cabinet side channels to the window jambs with two #8-32 x 3/4-inch self-threading screws. When doing this, be careful not to twist the side channel seals with the screws.

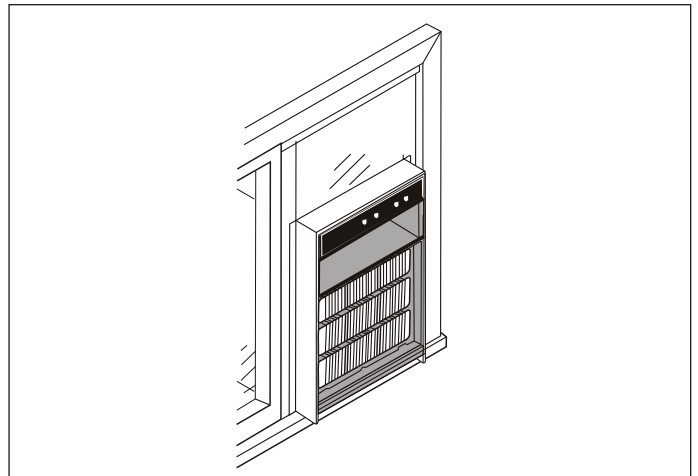


Figure 2-59.

### NOTE

Inserting screws will prevent the air conditioner from being pushed into the room.

### 16. To replace the front:

First reconnect the coupler plugs, move the exhaust control positioned through the front to the proper location. Gently push the front into position on the cabinet. It should click into place. Then replace the retaining screws that holds the panel in place.

## Section 2 Installation

### 8,000-12,000 BTU Thru-The-Wall Installation Instructions

#### For Existing Sleeve

Note that the air conditioner dimensions are: 24" wide, 14-1/2" high, and 18-1/2" deep (without front). Install air conditioner according to these installation instructions to achieve the best performance.

#### Items in the Thru-The-Wall Kit

You may not need all parts in the kit. Discard unused parts.

Part Description	Qty.
Tapered Spacer Blocks .....	17" Long ..... 2
Centering/Support Blocks ...	4-1/2" x 3-1/2" x 1-1/2" ..... 2
Plastic Divider .....	1/8" x 4-1/2" x 14-1/2" ..... 1
Stuffer Seal .....	1" x 1-1/2" x 84" ..... 1
Seal .....	1-1/2" x 1-1/2" x 26-1/2" ..... 2
Seal .....	1-1/2" x 1-1/2" x 14" ..... 2
Seal .....	1-1/2" x 3/8" x 26-1/2" ..... 2
Seal .....	1-1/2" x 3/8" x 14" ..... 2
Seal .....	1" x 3/4" x 14" ..... 1
Trim Frame (side legs) .....	2
Trim Frame (top & bottom legs) .....	2
Ground Wire (green) .....	1
Nut for grounding screw .....	1
Grounding Screw .....	1
Grille (plastic) .....	1
Nuts (plastic) .....	4
Screw w/washer .....	4

#### How to Install

##### Wall Sleeve Dimensions

Width	Height	Depth
25-1/2"	15-1/4"	16", 17-1/2" or 22"

#### NOTE

All wall sleeves used to mount a new Air Conditioner must be in sound structural condition and have a rear grille that securely attaches to sleeve, or rear flange that serves as a stop for the Air Conditioner.

#### CAUTION

When installation is complete, replacement unit **MUST** have a rearward slope as shown in Figure 2-60.

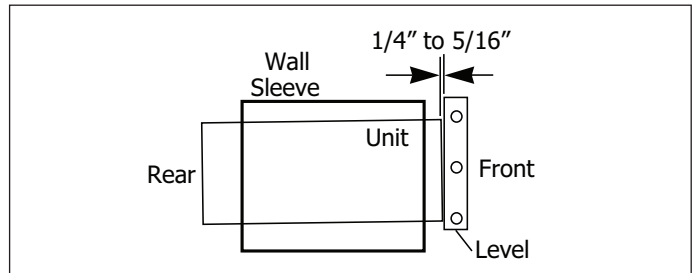


Figure 2-60.

- Remove old Air Conditioner from wall sleeve and prepare wall sleeve as follows:
  - Clean interior (do not disturb seals).
  - Wall sleeve must be securely fastened in wall before installing Air Conditioner. Drive more nails or screws through sleeve into wall if needed.
  - Repair paint if needed.
- If not existing, drill a 3/16" clearance hole for grounding screw through left side of wall sleeve in a clear area about 3 inches maximum (to suit) back from front edge of sleeve as shown in Figure 2-61. Next attach ground wire inside sleeve, using grounding screw and nut. Pull loose end of ground wire out front of sleeve and temporarily bend it down and around lower edge of sleeve.

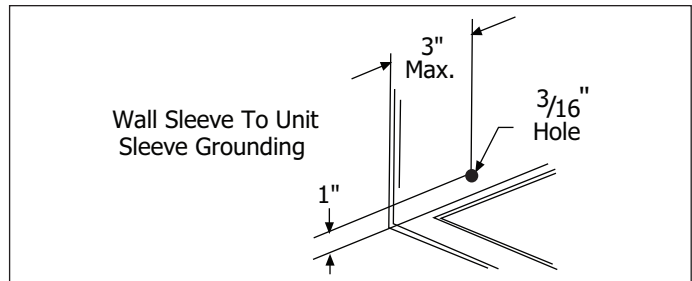


Figure 2-61.

- Prepare the wall sleeve for installation of the new unit per the following instructions.
  - Frigidaire 16"+ 17-1/2" Deep
  - Frigidaire 22" Deep
- Install new unit into wall sleeve.
- To attach ground wire to the new unit, remove the screw from the left side front.
- Assemble and install the Trim Frame.



## Section 2 Installation

### Installation Steps - 16" And 17-1/2" Deep

1. If wall sleeve does not have a rear grille or louvered panel, install plastic grille panel from kit. The plastic grille panel is mounted to the inside of wall sleeve at the rear flanges. There are (4) plastic nuts in the flanges of the wall sleeve. If sleeve is missing these nuts or they are damaged, replacement nuts and grille mounting screws are supplied with the kit. The nuts are installed from inside of the sleeve and are pressed into the square holes of rear flanges. Place grille against rear flanges and use (4) washer screws to secure grille to sleeve. (See Figure 2-62)
2. Cut and attach the (1) 1-1/2" x 3/8" x 26-1/2" long seal to 25-1/2" long. Attach (2) 1-1/2" x 3/8" x 14" long seals as shown. To attach the seals, remove the backing paper from the seal. Do not touch adhesive. Press seals firmly in place. (See Figure 2-63)
3. Attach 1" x 3/4" x 14" long seal to the inside of the grille panel. (See Figure 2-63)
4. Install the new unit into the wall sleeve. Attach the ground wire to the unit.
5. Install the 1" x 1-1/2" x 84" long weather seal between the wall sleeve and the unit. A flat bladed screwdriver or putty knife is recommended.
6. Assemble and install the Trim Frame.

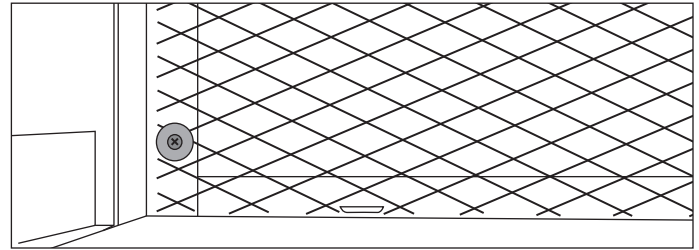


Figure 2-62.

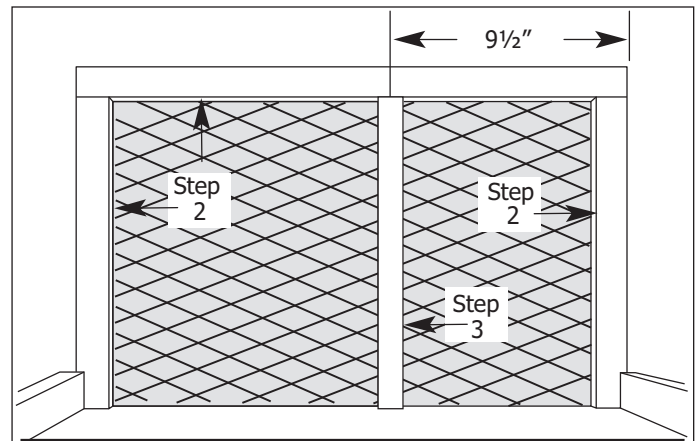


Figure 2-63.

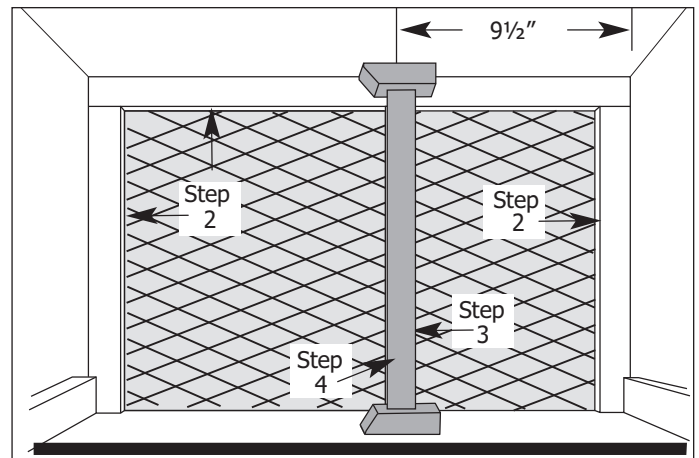


Figure 2-64.

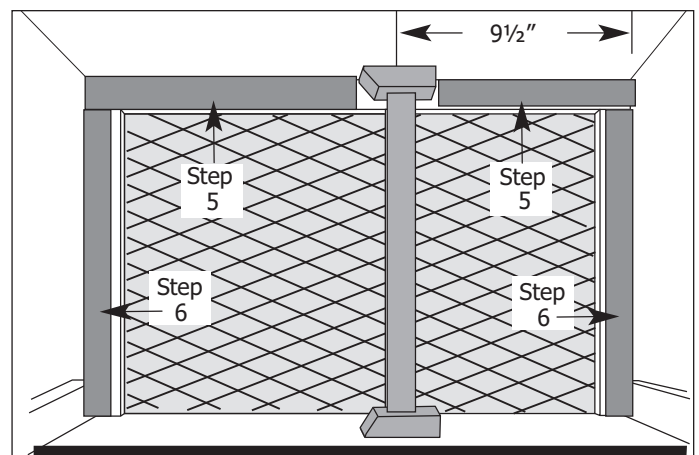


Figure 2-65.

### Installation Steps - 22" Deep

1. Follow step 1 above.
2. Attach the (2) 4-1/2" x 3-1/2" x 1-1/2" foam blocks to the inside of the wall sleeve. (See Figure 2-64)
3. Attach 1" x 3/4" x 14" long seal to the inside of the grille panel. (See Figure 2-64)
4. Cut the 1/8" x 4-1/2" x 14-1/2" long plastic divider to 13" long. Slide the plastic divider in the slots of the (2) foam blocks. (See Figure 2-64)
5. Cut to fit (1) 1-1/2" x 1-1/2" x 26-1/2" long seals as shown. (See Figure 2-65)
6. Attach (2) 1-1/2" x 1-1/2" x 14" long seals as shown. Seals should be flush with front portion of the 4-1/2" x 3-1/2" x 1-1/2" foam blocks which holds the plastic divider. (See Figure 2-65)
7. Install the new unit into the wall sleeve. Attach the ground wire to the unit as shown.
8. Install the 1"x 1-1/2" x 84" long weather seal between the wall sleeve and the unit. A flat bladed screwdriver or putty knife is recommended.
9. Assemble and install the Trim Frame.

## Section 2 Installation

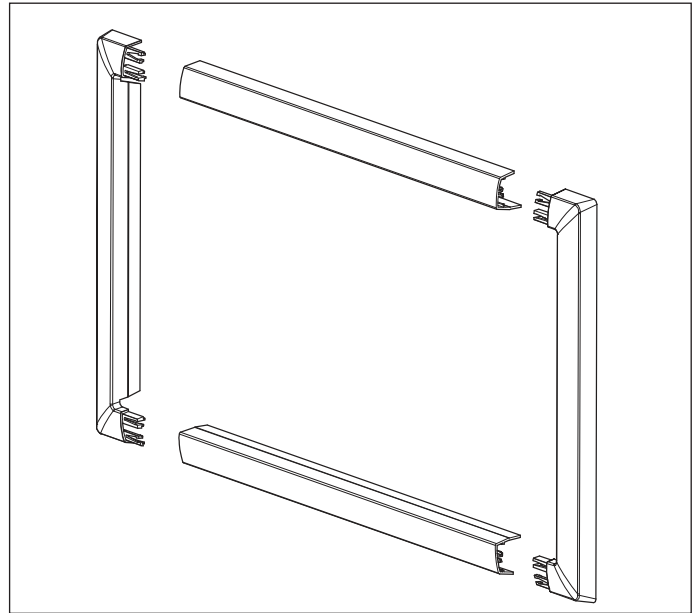
### Trim Frame Assembly

The purpose of trim frame is to cover space between wall sleeve and replacement unit cabinet. Each frame is made of four parts:

1. To assemble trim frame, insert snaps of side legs into top and bottom legs.
2. To install trim frame to sleeves, slide frame over cabinet until it is flush with the wall sleeve.

#### **NOTE**

Be sure to route the cord through the trim frame before placing the trim frame on the unit.



**Figure 2-66. Trim Kit**

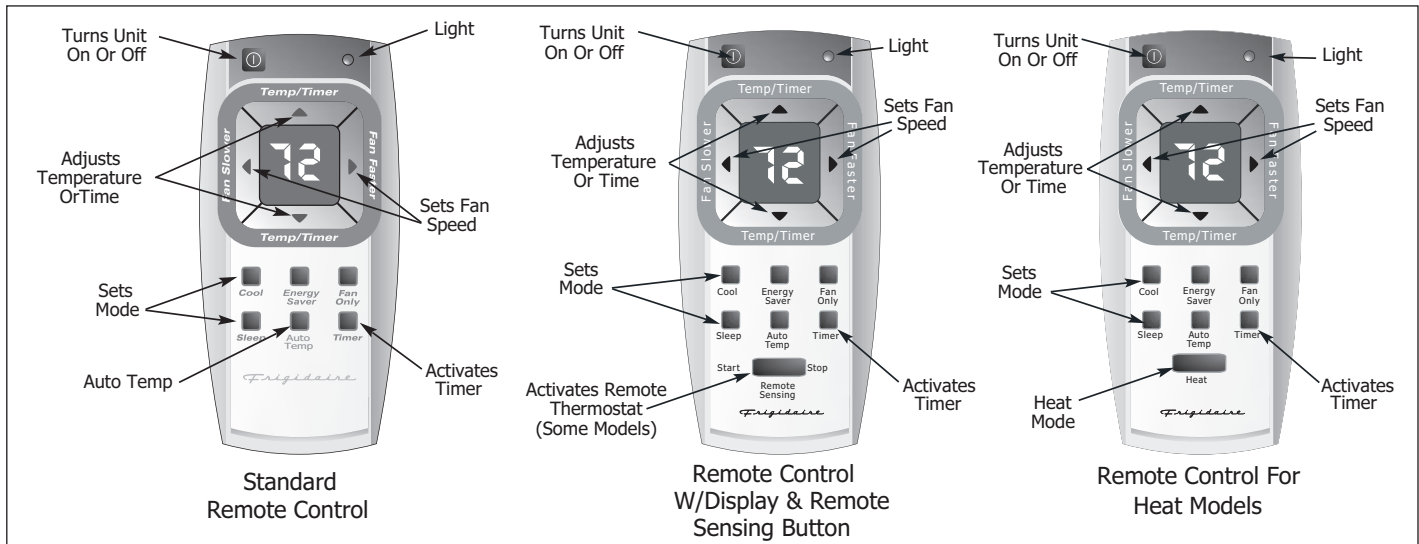


### Electronic Control Operating Instructions

Before you begin, thoroughly familiarize yourself with the control panel and remote as shown below and all its functions. Then follow the symbol for the functions you desire. The unit can be controlled by the touch pad alone or with the remote.

### Remote Controls

The illustration below shows the three remote controls configurations that are used with Frigidaire Room Air Conditioners.



**Figure 3-1.**



### WARNING

**Batteries may be AA, AAA or CR2025 depending on the remote supplied with the unit. Do Not Mix Old And New Batteries. Do Not Mix Alkaline, Standard (Carbon-Zinc) Or Rechargeable (Nichel-Cadmium) Batteries.**

## Section 3 Electronic Control

### Description of Control Panel Buttons For Basic Electronic Control

Before you begin, thoroughly familiarize yourself with the control panel and remote and all its functions. The unit can be controlled by the touch pad alone or with the remote.

#### ON/OFF BUTTON

Pressing the ON/OFF button will turn the unit on or off. The display will illuminate all the LED's, then the current room temperature will be displayed.

#### UP/DOWN ARROW BUTTONS (Temperature and Time)

Press or hold either UP (^) or DOWN (v) button until the desired temperature is seen on display. This temperature will be automatically maintained anywhere between 60°F (16°C) and 90°F (32°C) for cooling mode. The Temperature will be automatically maintained anywhere between 55°F (13°C) and 80°F (27°C) for heating mode for models with the heating capability.

For setting time, use the UP (^) or DOWN (v) button to increase or decrease the time desired.

#### FAN SPEED BUTTON

Press the FAN SPEED button to choose the desired fan speed and the LED indicator will illuminate at the fan speed setting. AUTO fan speed is not available in Fan Only Mode.

#### AUTO Fan Speed

The unit must be in Cooling Mode or Energy Saver Mode for AUTO fan speed to be chosen. Press the FAN SPEED button to chose from AUTO, HIGH, MED and LOW fan speeds.

The fan speed will begin in HIGH, then adjust to MED and LOW as the room temperature conditions change. For example in cooling, if the room doesn't get too warm it will stay at LOW. If the room temperature rises quickly, such as a door being opened, it will automatically go to HIGH speed. The fan speeds will adjust back to LOW as the room returns to the original set temperature.

#### MODE BUTTON

Press the MODE button to chose from FAN ONLY, ENERGY SAVER and COOL. The LED light will illuminate next to the MODE chosen.

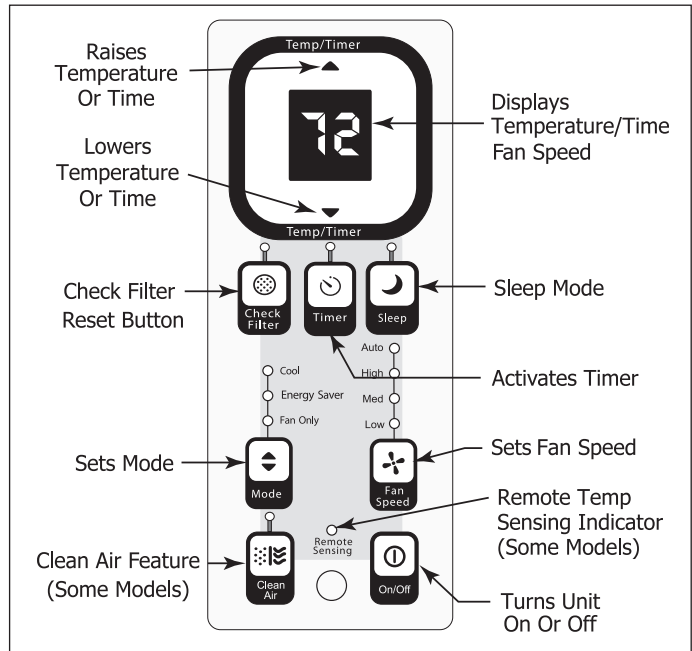


Figure 3-2.

#### FAN ONLY Mode:

Use this function only when cooling is not desired, such as for room air circulation. All Fan speeds except AUTO are available to be chosen. During this function, the display will show the actual current temperature, not the set temperature as in the cooling mode.

#### ENERGY SAVER Mode:

In this mode, the fan will continue to run for 3 minutes after the compressor shuts off. The fan then cycles on for 2 minutes at 10 minute intervals until the room temperature is above the set temperature, at which time the unit cooling system starts again.

#### COOL Mode:

In this mode all fan speeds can be chosen. The LED indicator will illuminate next to the fan speed as it is selected. Press or hold either UP (^) OR DOWN (v) button until the desired temperature is seen on display. This temperature will be automatically maintained anywhere between 60°F (16°C) and 90°F (32°C) for cooling mode.

#### NOTE

The "COOL" circuit has an automatic 3 minute time delayed start if the unit is turned off and on quickly. This prevents overheating of the compressor and possible circuit breaker tripping. The fan will continue to run during this time.

### TIMER BUTTON

For Delay Stop, the unit must be in the ON position. For Delay Start, the unit must be in the OFF position. When TIMER Mode is selected the LED will illuminate above the button.

To adjust timer setting, tap or hold the UP arrow (^) or DOWN arrow (v) to change the delay time by .5 hour increments up to 10 hours, then by 1 hour increments up to 24 hours. The control will count down the timer remaining until start (8, 7.5, 7, etc.). The Delay Start mode automatically selects cooling with maximum Fan Speed. The temperature maintained will be the same as previously set. To change the set temperature, press "COOL" then Up or Down arrows until the desired temperature is indicated on the display. After 5 seconds, the control will automatically change the display back to the hours remaining until the unit will start/stop. Turning the unit "ON" or "OFF" at any time will cancel the Delay Start/Stop function. The delay Start/Stop feature will work until the unit either starts or stops. Once this has happened then the above steps have to be repeated again.

### SLEEP MODE BUTTON

Press the SLEEP Mode button to activate this feature. The LED will illuminate above the button. In SLEEP Mode the selected cooling temperature will increase by 2°F 30 minutes after the mode is selected. The temperature will then increase by another 2°F, after an additional 30 minutes. This new temperature will be maintained for 7 hours before it returns to the originally selected temperature. This ends the SLEEP Mode and the unit will continue to operate as originally programmed. The SLEEP Mode program can be cancelled at any time during operation by pressing SLEEP Mode button.

### CLEAN AIR BUTTON

Press the CLEAN AIR button to activate this feature. The LED will illuminate above the button. When this feature is turned ON, the electronic air purifier is energized to remove pollen and impurities from the air. To cancel this feature, press the CLEAN AIR button and the LED will turn OFF and the electronic air purifier will shut off.

This feature can only be activated at the unit touchpad only.

### REMOTE SENSING FEATURE (on some models)

This feature is activated from the remote control only. To activate the remote sensing feature, point the remote control towards the unit and press the remote sensing start button. The LIGHT on the unit control will pulse to indicate it received the signal. The LIGHT on the remote control will pulse each time it sends a signal. It will continue to send this signal until the feature is deactivated by pressing the remote sensing stop button. If the unit does not receive the remote sensing signal during any 3 minute interval, the unit will keep indicating the remote sensing mode has ended. The display on the remote control indicates the temperature at the remote. The unit display indicates the set temperature.

### CHECK FILTER BUTTON

This feature is a reminder to clean the air filter for more efficient operation and cooling. The LED indicator will illuminate after 250 hours of operation. To reset after cleaning the filter, press the CLEAN FILTER button and the light will go off.

### FAHRENHEIT /CELSIUS

The control is capable of displaying temperature in degrees Fahrenheit or degrees Celsius. To convert from one to the other, press and hold the UP and DOWN Temperature Selection Buttons at the same time for 3 seconds.

### FAULT CODES

If the display reads "ES" or "AS" a sensor has failed. The "ES" is for the evaporator thermistor and the "AS" is the ambient thermistor located in the remote control.

## Section 3 Electronic Control

### Description of Control Panel Buttons For Electronic Control of Median and Heavy Duty Models FAM, FAS and FAZ

The control panels for the different models covered in this manual will have many of the same buttons and functions only the control panel layout will differ.

Unless otherwise noted the button features listed for the Basic Electronic Control will be the same all models.

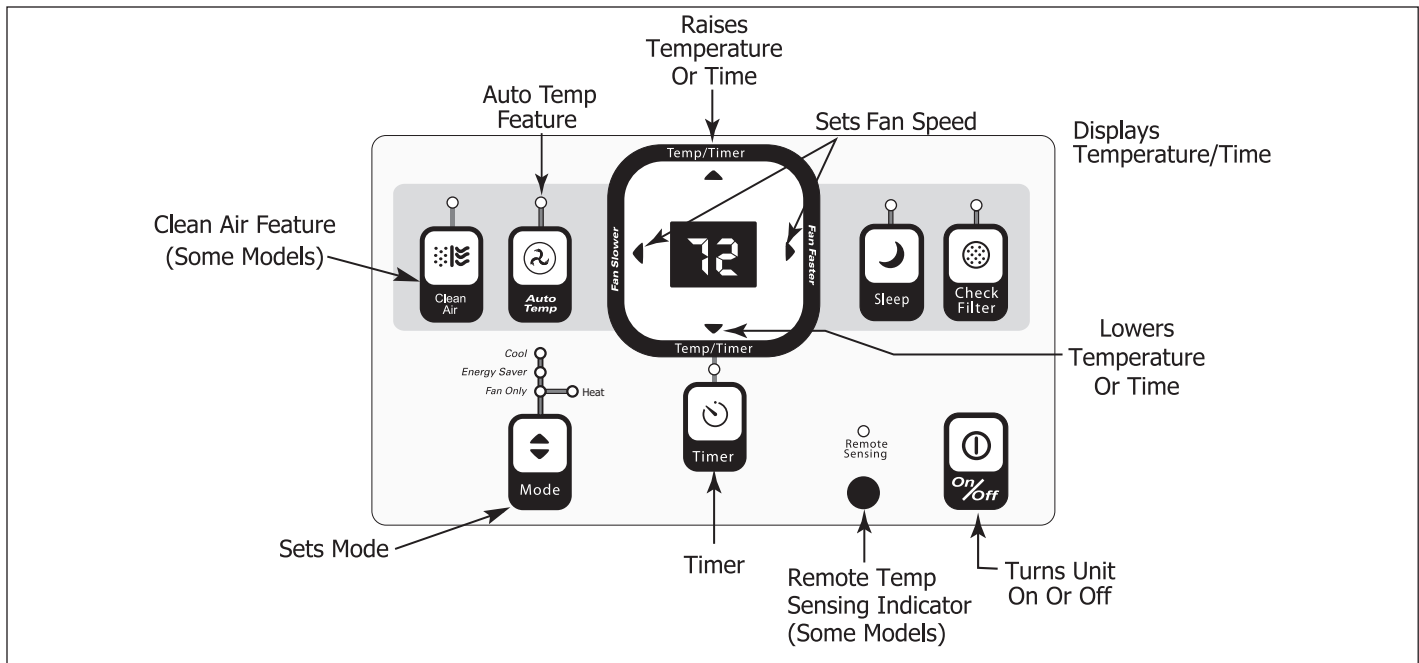


Figure 3-3.

#### HEAT MODE (Available On Some Models Only)

This feature can be used with any combination of FAN SPEEDS, TIMER, or SLEEP MODES. The HEAT LED will be illuminated above the MODE Button. When in the HEAT Mode, the fan will run continuously while heat is needed. The temperature will automatically be maintained anywhere between 55°F (13°C) and 80°F (27°C). When the room set temperature is satisfied, the fan will cycle off and on to circulate and sample the room air.

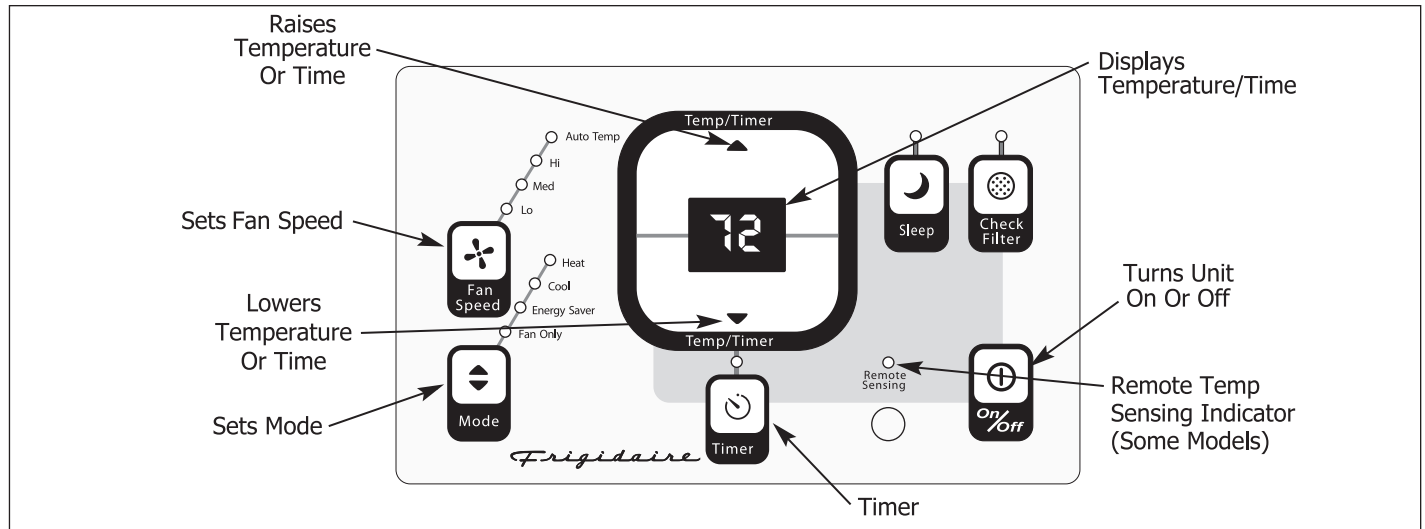
#### Fault Codes

If the display reads "AS", "HS" or "ES" a sensor has failed. The "ES" is for the evaporator thermistor and the "AS" is the ambient thermistor located in the remote control. A "HS" is for the heat thermistor on heat capable models only.

### Description of Control Panel Buttons For Electronic Control of Thru-The-Wall Model FAH

The control panels for the different models covered in this manual will have many of the same buttons and functions only the control panel layout will differ.

Unless otherwise noted, the button features listed for the Basic Electronic Control will be the same all models.



**Figure 3-4.**

#### Heat Mode (Available On Some Models Only)

This feature can be used with any combination of FAN SPEEDS, TIMER, or SLEEP MODES. The HEAT LED will be illuminated above the MODE Button. When in the HEAT Mode, the fan will run continuously while heat is needed. The temperature will automatically be maintained anywhere between 55°F (13°C) and 80°F (27°C). When the room set temperature is satisfied, the fan will cycle off and on to circulate and sample the room air.

#### Fault Codes

If the display reads "AS", "HS" or "ES" a sensor has failed. The "ES" is for the evaporator thermistor and the "AS" is the ambient thermistor located in the remote control. A "HS" is for the heat thermistor on heat capable models only.

## Section 3 Electronic Control

### Description of Control Panel Buttons For Electronic Control of Slider/Casement Model FAK

The control panels for the different models covered in this manual will have many of the same buttons and functions only the control panel layout will differ.

Unless otherwise noted, the button features listed for the Basic Electronic Control will be the same all models.

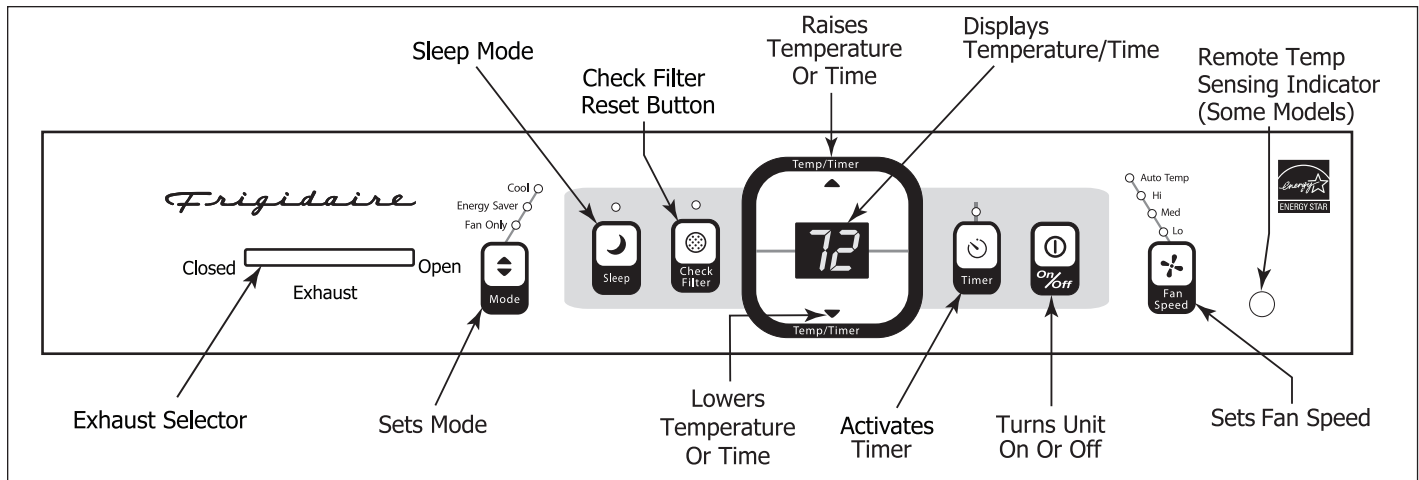


Figure 3-5.

#### Exhaust Control

The exhaust control allows the air conditioner to either recirculate inside air (Closed) or exhaust air to the outside (Open). The Closed position is used when maximum cooling is desired. It may also be used for air circulation without cooling when the air conditioner is set to any fan position. The Open position removes stale air from the room and exhausts it to the outside. Fresh air is drawn in through normal passages in the home.

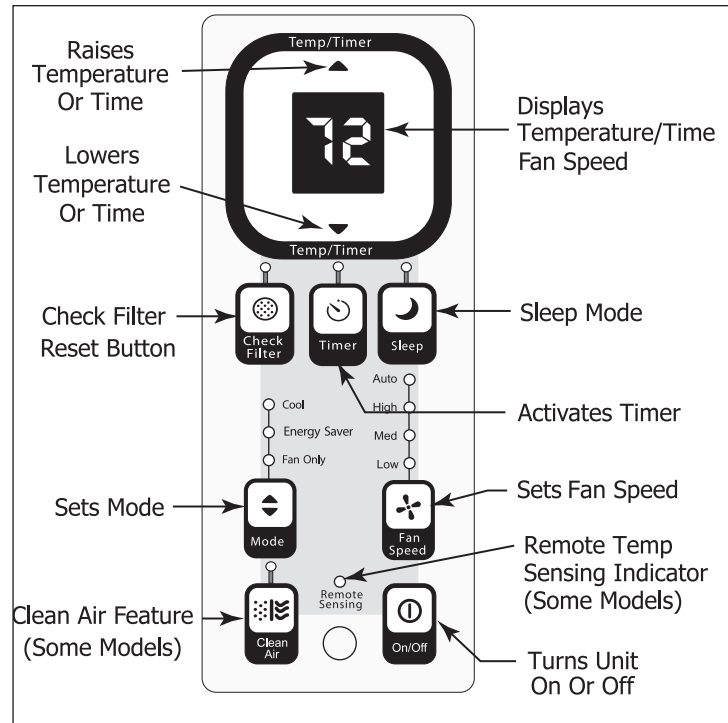
#### Fault Codes

If the display reads "ES" or "AS" a sensor has failed. The "ES" is for the evaporator thermistor and the "AS" is the ambient thermistor located in the remote control.

### Description of Control Panel Buttons For Electronic Control of Compact and Mini Models FAA, FAC and FAX

The control panels for the different models covered in this manual will have many of the same buttons and functions only the control panel layout will differ.

Unless otherwise noted, the button features listed for the Basic Electronic Control will be the same all models.



**Figure 3-6.**

### Fault Codes

If the display reads "ES" or "AS" a sensor has failed. The "ES" is for the evaporator thermistor and the "AS" is the ambient thermistor located in the remote control.

## Section 3 Electronic Control

### Operation Of Current Device (All Models)

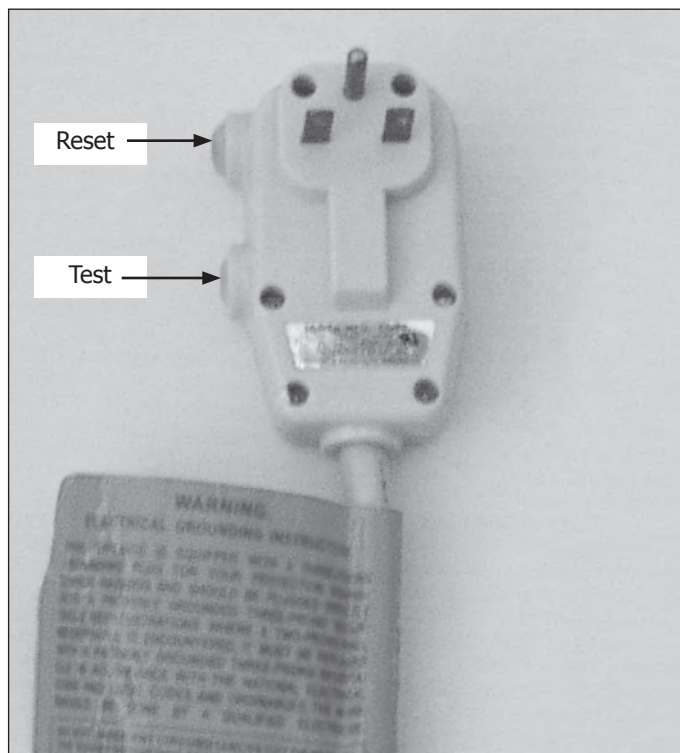
The power supply cord contains a current device that senses damage to the power cord. To test your power supply cord do the following:

1. Plug in the Air Conditioner.
2. The power supply cord will have TWO buttons on the plug head. Press the TEST button. You will notice a click as the RESET button pops out. (See Figure 3-7)
3. Press the RESET button. Again you will notice a click as the button engages.
4. The power supply cord is now supplying electricity to the unit.

#### NOTE

Notes about the power supply cord current device:

1. Do not use this device to turn the unit on or off.
2. Always make sure the RESET button is pushed in for correct operation.
3. The power supply cord must be replaced if it fails to reset when either the TEST button is pushed, or it cannot be reset. A new one can be obtained from the product manufacturer.
4. If power supply cord is damaged, it CANNOT be repaired. It MUST be replaced by one obtained from the product manufacturer.



**Figure 3-7.**



### COMPONENT TEARDOWN

This section explains how to access and remove components from Frigidaire Room Air Conditioners, and has been arranged in such a way as to simulate which components would need to be removed first in order to gain access to other components. When following a component removal procedure, it may be necessary to reference another component removal procedure listed earlier in this section.

IMPORTANT NOTE: Before continuing, please take note of the WARNINGS, CAUTIONS and NOTES below.



#### **WARNING**

- **IF IT IS NECESSARY TO REMOVE A ROOM AIR CONDITIONER UNIT FROM ITS INSTALLATION, USE PROPER LIFTING TECHNIQUES AS UNITS ARE HEAVY AND COULD FALL RESULTING IN SERIOUS INJURY OR DEATH. PULLING A UNIT FROM ITS INSTALLATION SHOULD ONLY BE PERFORMED BY A TRAINED AUTHORIZED SERVICE TECHNICIAN OR INSTALLER.**
- **TO AVOID ELECTRIC SHOCK, POWER TO A ROOM AIR CONDITIONER MUST BE DISCONNECTED WHENEVER ACCESSING AND/OR REMOVING COMPONENTS POWERED BY ELECTRICITY OR COMPONENTS NEAR OTHER ELECTRICAL COMPONENTS.**
- **AFTER SERVICE IS COMPLETED, BE SURE ALL SAFETY-GROUNDING CIRCUITS ARE COMPLETE, ALL ELECTRICAL CONNECTIONS ARE SECURE, AND ALL ACCESS PANELS ARE IN PLACE.**
- **IF UNIT WAS USED PRIOR TO SERVICE, THE COMPRESSOR ASSEMBLY WILL BE HOT. WEAR PROTECTIVE GLOVES AND THE APPROPRIATE SAFETY GEAR WHEN WORKING WITH COMPRESSORS.**



#### **CAUTION**

**To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.**



#### **CAUTION**

- **Metal edges may be sharp. Use caution and wear appropriate safety equipment when servicing evaporators and condensers to avoid personal injury.**
- **If working in the compressor area, remember that compressor and tubing may be hot.**



#### **CAUTION**

**When handling and or replacing a control board it is important that the technician have a wrist ground strap on and connected to the cabinet or another grounding position to prevent static electricity from damaging the board.**



#### **NOTE**

Certain models will be grouped together as the procedure and components are similar with only minor differences. Due to the number of models within the series, some teardown procedures may vary from the descriptions given in this section.

## Section 4 Component Teardown

### Model FAM (Medium Duty) and Model FAS (Heavy Duty) Series

The FAM and FAS Series are similar in design and components. The illustrations will feature the FAM series unless otherwise noted.

#### NOTE

Due to the number of models within the series, some teardown procedures, such as locations and number of fasteners, and location of electrical system components, may vary from the descriptions given in this section.

Always use the wiring diagram attached to the unit for all electrical connections.

#### Filter And Front Panel Assembly Removal

1. Disconnect the power supply from unit.
2. Push the vent handle to the vent closed position (where applicable).
3. Open the front grille panel by using both hands, grabbing along the sides of the unit and pulling the top of the front grille panel away from the unit until the retaining tabs release from the front panel. Tilt the front grille panel away from the unit.
4. Grasp the filter in the center and pull out of unit.
5. Remove front grille panel by pulling the front grille panel upwards till the hinges can be pulled out from the slots at the bottom corners of the unit frame.
6. Extract the four screws securing the front panel to the unit frame. (See Figure 4-1)
7. Remove the front panel by pulling the front panel outer edges away from the unit frame until the tabs are free of the slots. (See Figure 4-2, Arrows show tab locations) Release the four side tabs first then lift the front panel upwards until the front panel is free.

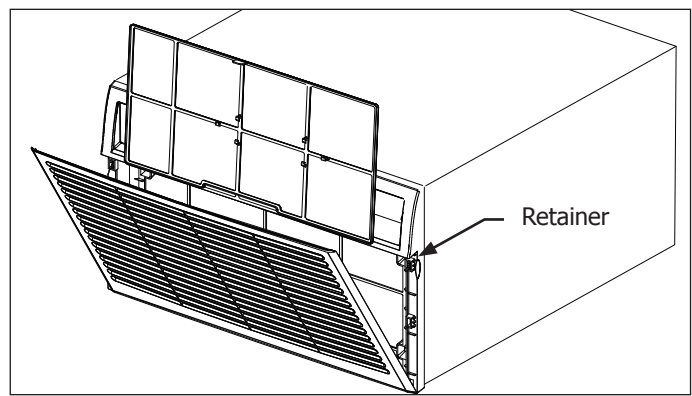


Figure 4-1.

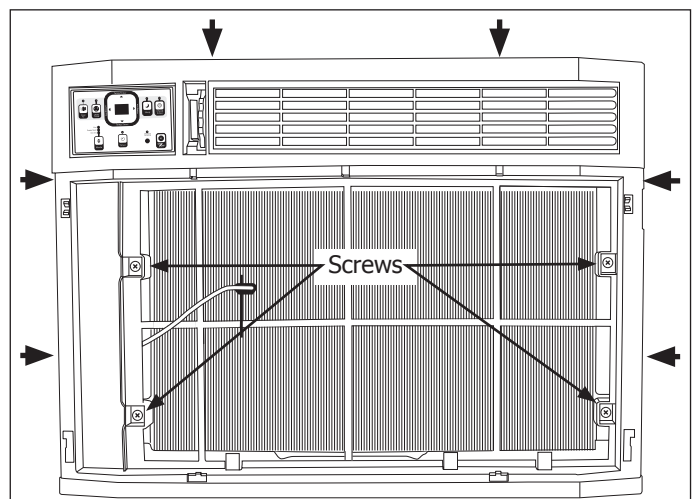


Figure 4-2.

#### Cabinet Wrapper/Sleeve Removal

To remove the cabinet wrapper/sleeve:

1. Disconnect the power supply from unit.
2. Remove the front panel assembly.
3. At the front of the unit is a handle to pull the air conditioner assembly from the cabinet wrapper/sleeve. Pull the assembly straight out until free of the cabinet wrapper/sleeve.

## Section 4 Component Teardown

### User Interface Removal

The user interface is secured with a screw to the unit frame. The cabinet wrapper/sleeve does not need to be removed to remove the user interface.

To remove the user interface:

1. Disconnect power supply from unit.
2. Remove the front panel assembly.
3. Extract screw securing user interface to unit frame. (See Figure 4-3)
4. Disconnect the user interface at connector.

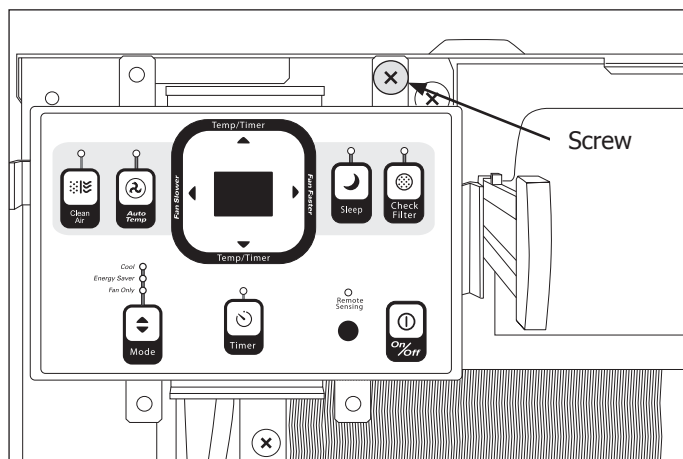


Figure 4-3.

**NOTE:** The FAS series user interface mounting screw is located along the left side of the unit.

**NOTE:** Some FAM models will have two mounting screws securing the user interface to the unit frame.

### User Interface Circuit Board Removal

The user interface is secured with a screw to the unit frame. The cabinet wrapper/sleeve does not need to be removed if the user interface wire harness has a quick disconnect. If wire harness does not have a quick disconnect, the cabinet wrapper/sleeve will have to be removed and user interface disconnected at the control board.

To remove the user interface:

1. Disconnect power supply from unit.
2. Remove the front panel assembly.
3. Extract screw securing user interface to unit frame.
4. Disconnect the user interface at the connector. (See Figure 4-4)
5. Extract the four screws securing the user interface board to the plastic housing.

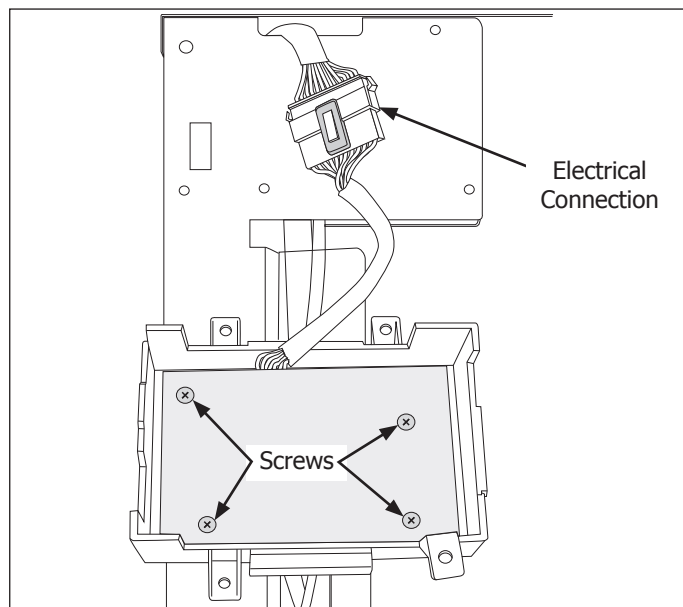


Figure 4-4.

### Blower Scroll Front Cover Removal

The blower scroll front cover is secured with 4 screws located at the top left and right sides of the unit.

**NOTE:** Heat equipped models will have two screws at the top and one screw on each side.

This cover must be removed to access the electrical components of the unit.

To remove the blower scroll front cover:

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve.
3. Extract the screws securing the blower scroll front cover to the left and right upper sides of the unit. (See Figure 4-5)
4. Remove cover from unit.

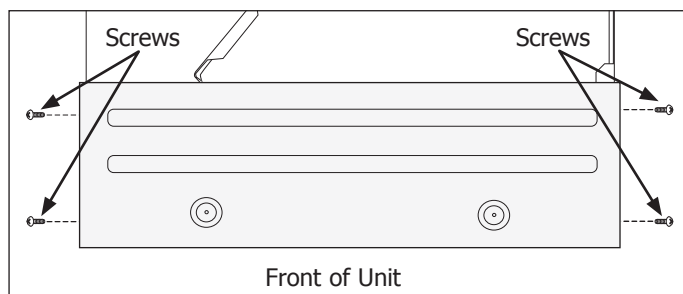


Figure 4-5. View from Top of Unit

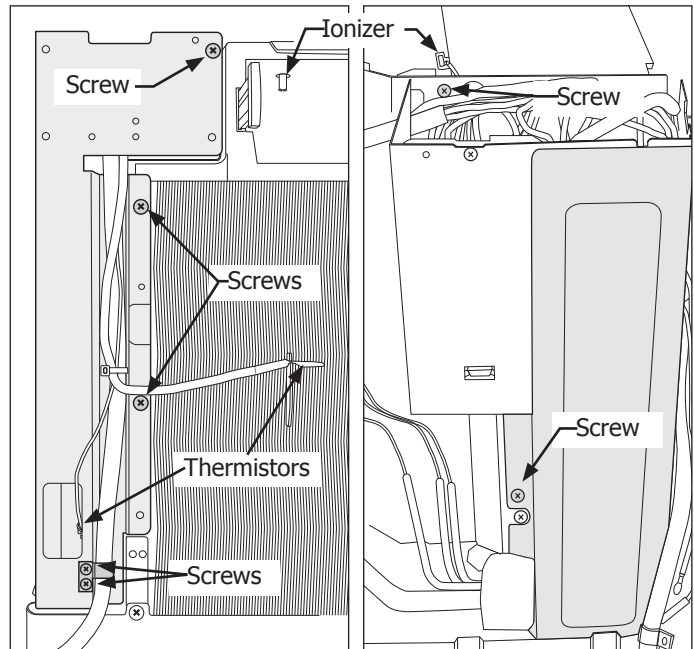
## Section 4 Component Teardown

### Left Bulkhead Partition Removal

The electrical component connections to the control board are located in the control box located in the upper left hand corner of the unit. The left bulkhead partition must be removed first to access all the components in the control box.

To remove the left bulkhead partition:

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve. Remove the blower scroll front cover.
3. Pull thermistor from retainer on copper tubing.
4. Remove thermistor from retainer on evaporator.
5. Extract the two screws securing power cord to left bulkhead partition. (See Figure 4-6)
6. Extract the two screws securing left bulkhead partition to the evaporator. (See Figure 4-6)
7. Extract screw in the upper right hand corner of left bulkhead partition. (See Figure 4-6)
8. From left side of unit, extract the screw below the control box assembly. (See Figure 4-7)
9. To aid in removing the bulkhead, extract the screw securing the control box to the evaporator mounting bracket. (See Figure 4-7) Remove thermalmastic from around ionizer and pull ionizer from slot in scroll blower housing.
10. Carefully pull the control box and bulkhead towards the front of the unit to access the screw located inside the front of the control box that secures the power cord to the bulkhead, then extract the screw.
11. The bulkhead has a flange that the control box rests upon. Lift the control box upwards and pull bulkhead out from under and behind the control box and over the copper tubings and insulation, then remove from the unit.
12. Reinstall the screw securing the control box to the evaporator mounting bracket. This will make accessing and removing the electrical components in the control box much easier.



**Figure 4-6. View from Front of Unit**

**Figure 4-7. View from Left Side of Unit**

**NOTE: Some models will not feature an ionizer.**

## Section 4 Component Teardown

### Left Bulkhead Partition (Heater Equipped Models)

The electrical component connections to the control board are located in the control box located in the upper left hand corner of the unit. The left bulkhead partition must be removed first to access all the components in the control box.

To remove the left bulkhead partition:

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve. Remove the blower scroll front cover.
3. Pull thermistor from retainer on copper tubing.
4. Remove thermistor from retainer on evaporator.
5. Extract the screws on the left side of the bulkhead partition. (See Figure 4-8) This will include the screw securing terminal block to the left bulkhead partition.
6. Extract the screw from behind left bulkhead partition and the screw securing the left bulkhead partition to the top of the front partition. (See Figure 4-8)
7. Cut wire harness retaining straps, then pull apart to allow access to the wire harness connections to the electrical components.
8. The control board is mounted with a metal bracket that slides over the top of the left bulkhead partition. Carefully pull the control board out from inside the compartment. Disconnect compressor and condenser fan wire leads from control board, capacitors and terminal blocks.
9. Disconnect red and white heater wire leads from capacitor and terminal block.
10. Carefully pull the left bulkhead partition with the electrical components off of the unit.

### Power Cord Removal

To remove the power cord:

1. Disconnect power supply from unit.
2. Pull the unit from the cabinet wrapper/sleeve. Remove the blower scroll front cover and left bulkhead partition. Cut retaining straps securing the wiring harness in the control box area.
3. Disconnect black wire from side 1 and white wire from side 2 of terminal block XT1. (See Figure 4-10)
4. Extract the ground screw that secures the power cord ground wire to the control box. (See Figure 4-9)
5. Cut retaining strap securing the power cord and thermistor wires together, then remove power cord.

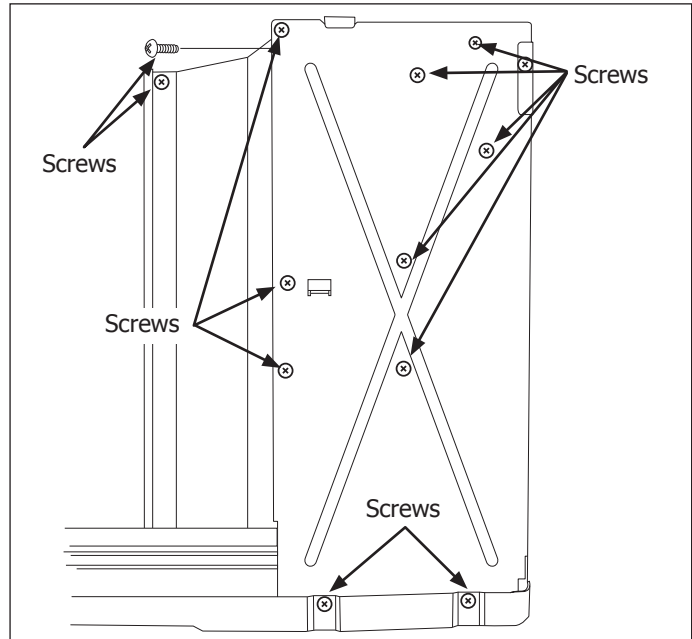


Figure 4-8. FAM Series Heater Equipped Model

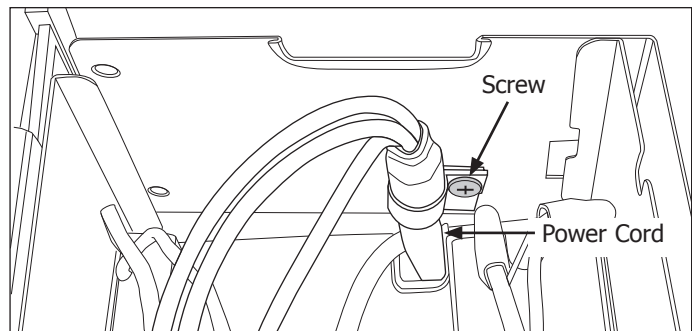


Figure 4-9. FAM Series No Heat

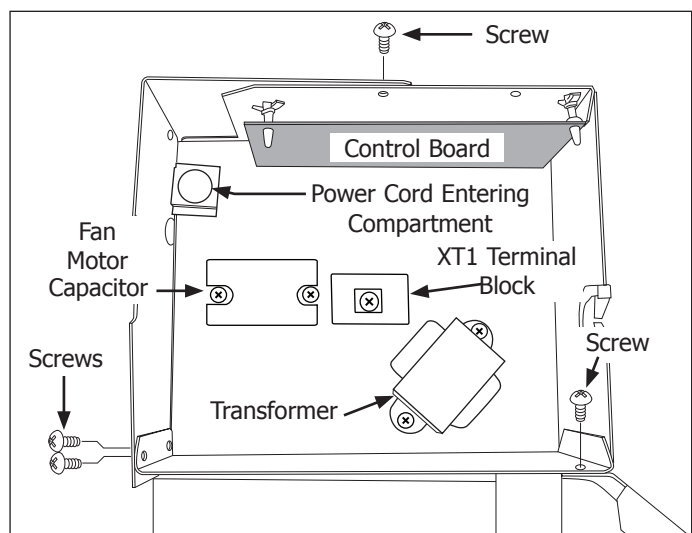


Figure 4-10. Control Box FAS Series No Heat  
Wires omitted for clarity

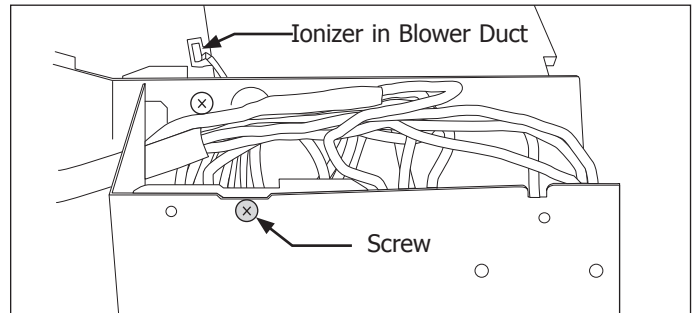
## Section 4 Component Teardown

### Accessing the Control Board

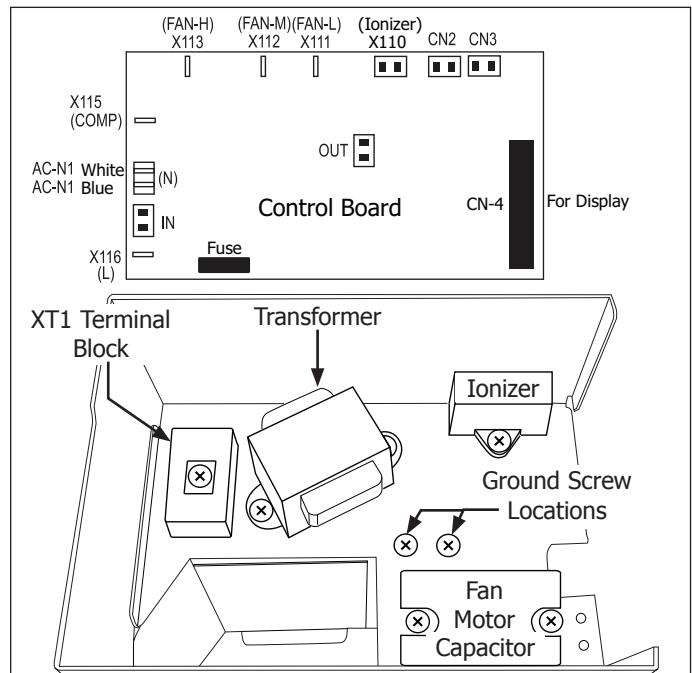
The control board is secured with a screw to the control box on the upper left hand side. (See Figure 4-11) Pulling the control board out from its installation will make accessing the remaining electrical components much easier.

Before attempting to pull the control board from its installation:

1. Disconnect power supply from unit.
2. Remove the thermalmastic from the wire harness entering the control box.
3. Remove the wire harness from the retainer at the back of the control box and cut all retaining straps.
4. Remove the power cord.
5. Disconnect the white wire at the top of the control board at position N (AC-N1). Removing this wire will allow you to pull the control board out from its installation.
6. Disconnect wire leads from control board. Thermistor connections at CN2 and CN3 may be glued to the control board. Carefully remove glue before attempting to remove the connectors.



**Figure 4-11. FAM Series Shown**



**Figure 4-12. FAM Series Shown  
Wires omitted for clarity.**

### Fan Motor Capacitor Removal

1. Disconnect power supply from unit.
2. Remove control board.
3. Disconnect wire leads from capacitor terminals. Label as needed for proper reconnection.
4. Extract the two screws securing the capacitor to the bottom of the control box. (See Figure 4-12)

### Transformer Removal

1. Disconnect power supply from unit.
2. Remove control board.
3. Disconnect wire leads leading from transformer to the control board (X115 and AC-N1 Blue wire). Label as needed for proper reconnection.
4. Extract the two screws securing the transformer to the bottom of the control box. (See Figure 4-12)

### Terminal Block Removal

1. Disconnect power supply from unit.
2. Remove control board.
3. Disconnect wire leads from terminal block. Label as needed for proper reconnection.
4. Extract the screw securing the terminal block to the bottom of the control box. (See Figure 4-12)

### Ionizer Removal

1. Disconnect power supply from unit.
2. Remove control board.
3. Disconnect wire leads leading from ionizer to the control board (X110). Label as needed for proper reconnection. (See Figure 4-12)
4. Remove ionizer cable from installation in blower duct. Feed cable through hole in control box.
5. Extract ground screw from bottom of control box to free the ground wire leading from the ionizer.
6. Extract the screw securing the ionizer to the bottom of the control box.



## Section 4 Component Teardown

### Power Cord And Fan Motor Capacitor Removal (Heater Equipped Models)

To remove the power cord and fan motor capacitor:

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve. Remove the blower scroll front cover and left bulkhead partition screws. Cut retaining straps securing the wiring harness in the control box area.
3. Discharge capacitor.

#### **CAUTION**

To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.

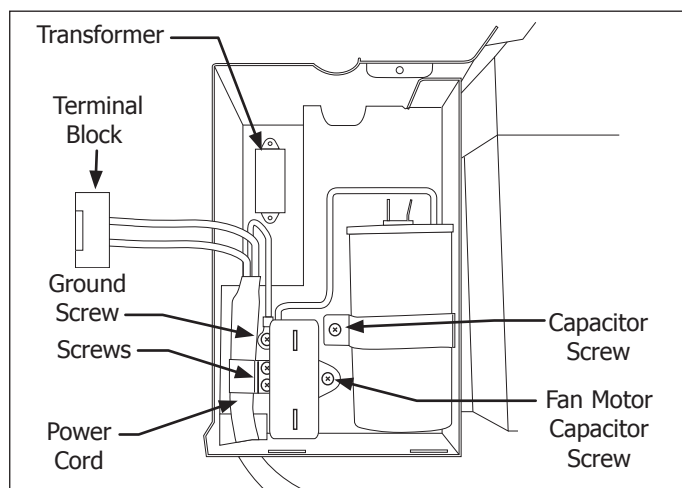
4. Disconnect wire leads from fan motor capacitor.
5. Extract screw that secures the fan motor capacitor to the bottom of the control box. Remove capacitor.
6. Disconnect power cord wire leads from capacitor and terminal block.
7. Extract the two screws securing the power cord to the bottom of the control box. (See Figure 4-13)
8. Extract the ground screw securing the power cord ground wire to bottom of control box.
9. Cut any retaining straps securing power cord to unit, then pull power cord from unit.

### Capacitor Removal

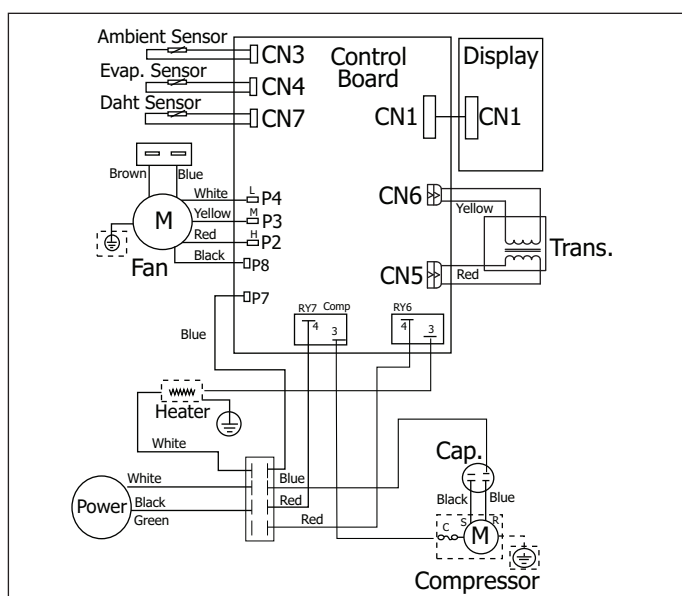
4. Follow steps 1-3 above.
5. Disconnect wire leads from capacitor.
6. Extract screw securing the capacitor mounting strap to bottom of control box and remove from unit.

### Thermistor Removal

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve. Remove the blower scroll front cover and left bulkhead partition screws. Cut retaining straps securing the wiring harness in the control box area.
3. Cut any retaining straps securing the thermistors to other wires or components.
4. Disconnect thermistor wire leads from control board, then pull from unit. (See Figure 4-14)



**Figure 4-13. FAM Series With Heat Shown with control board removed.**



**Figure 4-14. FAM Series With Heat Wiring Schematic**

### Transformer Removal

The transformer is mounted to the lower section of the control box compartment. The screws are accessible only after the left bulkhead partition is removed with the electronic components.

1. Disconnect power supply from unit.
2. Remove left bulkhead partition.
3. Disconnect wire leads from transformer at the control board.
4. Extract the two screws securing transformer to the bottom of control box. (See Figure 4-13)

## Section 4 Component Teardown

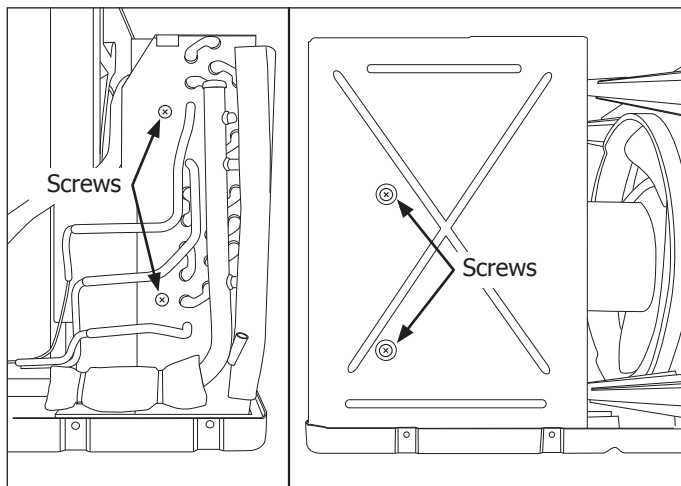
### Heater Removal

To remove the heater:

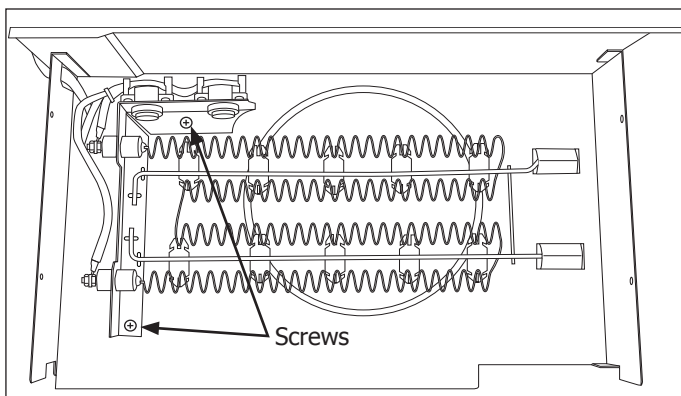
1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve. Remove the blower scroll front cover.
3. Disconnect the heater electrical leads, the red wire from the control board and the white wire from the terminal block.
4. Remove the left bulkhead partition with the electronic components.
5. Extract the two screws from each side of the evaporator securing heater housing to back of the evaporator. (See Figure 4-15)
6. Carefully pull the heater housing out from behind evaporator.
7. Lay the heater and front scroll cover on a flat surface and extract the two screws securing the heater assembly to the front scroll cover. (See Figure 4-12)
8. Slide heater assembly to the left until the metal legs are free of the retaining slots then pull heater assembly off of front scroll cover.

#### NOTE

If the thermal limiter and/or the thermostat are defective, the entire heater assembly must be replaced.



**Figure 4-15. FAM Series With Heat**



**Figure 4-16.**



## Section 4 Component Teardown

### Compressor Capacitor Removal

The compressor capacitor is located under a cover mounted to the back of the scroll blower duct assembly.

To remove the compressor capacitor:

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve.
3. Extract the two screws securing the capacitor cover to the unit frame. (See Figure 4-17)
4. Discharge capacitor.



### CAUTION

To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.

5. Disconnect the wire leads from the capacitor.
6. Extract the screw securing the capacitor mounting strap to the cover. Remove capacitor from unit. (See Figure 4-18)

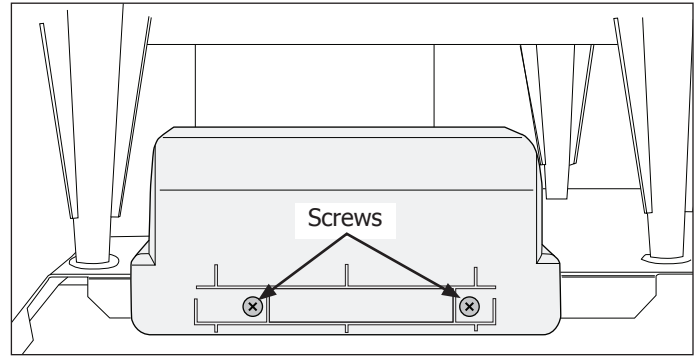


Figure 4-17.

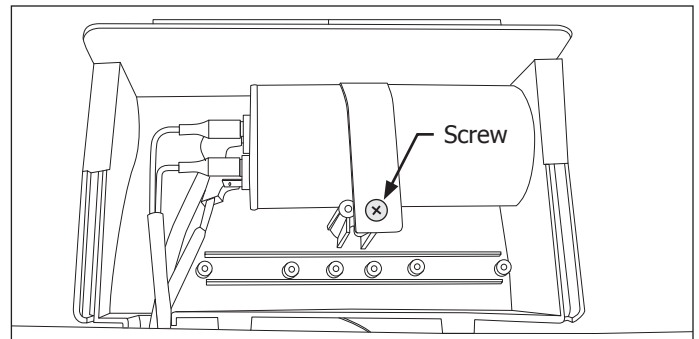


Figure 4-18.

### Condenser Fan Cover Removal

To remove the condenser fan cover:

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve.
3. Extract the screw from each side of the cover. (See Figure 4-19)
4. Extract the three screws from the front of the cover and lift off condenser fan assembly.

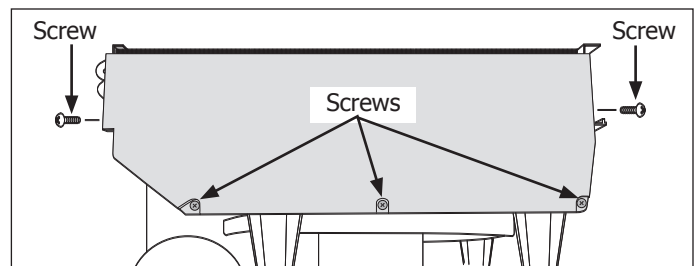


Figure 4-19.

## Section 4 Component Teardown

### Removing the Condenser Fan and Blower Assembly

The condenser fan and blower assembly consists of the blower wheel, condenser fan and shroud, front and rear blower housing and right bulkhead partition. The assembly is secured with screws to the evaporator, condenser and the unit base.

To remove the condenser fan and blower assembly:

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve.
3. Remove the front scroll cover. The wire leads from the compressor, condenser fan and capacitor must be disconnected from the control box components. The control box must then be removed from the unit.
4. Remove the capacitor cover. Disconnect wire leads and remove from unit.
5. Cut wire retainers, then route the wire harness leads so that the condenser fan assembly can be pulled straight up out from the unit base.
6. Remove condenser fan cover.
7. Extract the two screws from each side securing the fan assembly to the condenser assembly. (See Figure 4-20)
8. Extract the two screws from the lower right side securing the right bulkhead partition to the unit base. (See Figure 4-20)
9. Extract the two screws from the right front securing the right bulkhead partition to the evaporator. (See Figure 4-21)
10. Extract the two screws from the left side securing the right bulkhead partition to the unit base and the evaporator.
11. Extract the two screws under the condenser fan motor securing the assembly to the unit base. (See Figure 4-20)
12. Pull condenser fan assembly straight up out from the unit base.

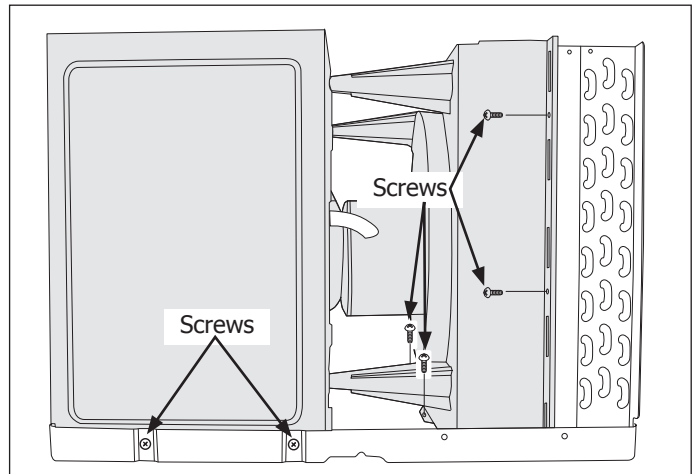


Figure 4-20.

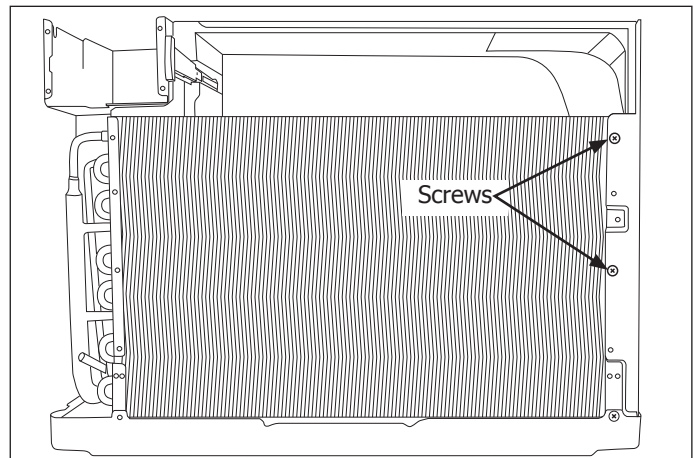


Figure 4-21.

## Section 4 Component Teardown

### Blower Housing Removal

The blower housing is a two piece styrofoam assembly that provides an air passage for cold air exiting the unit.

To remove the blower housing:

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve.
3. Remove the condenser fan assembly from the unit.
4. From inside the air duct, pull back on the air vent handle to release the retaining tab on the vent linkage. Pull handle from air duct. (See Figure 4-22)
5. The front styrofoam piece may now be separated from the rear piece.

#### NOTE

The blower wheel must be removed before the rear styrofoam piece can be pulled from the right bulkhead partition.

### Blower Wheel Removal

To remove the blower wheel:

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve.
3. Remove the condenser fan assembly from the unit. Remove the front styrofoam section of the air duct.
4. Use a 16mm socket or wrench and remove the nut securing the blower wheel to the motor shaft. Pull the lock washer and washer off shaft, then pull blower wheel off shaft. (See Figure 4-23)
5. The rear section of the styrofoam air duct may now be removed from the right bulkhead partition.

### Right Bulkhead Partition Removal

To remove the right bulkhead partition:

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve.
3. Remove the condenser fan assembly from the unit. Remove blower wheel and rear styrofoam section or air duct.
4. Extract the three screws securing the rear section of the condenser fan assembly from the right bulkhead partition. (See Figure 4-24)

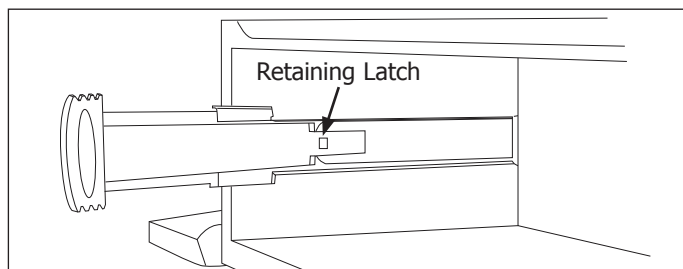


Figure 4-22.

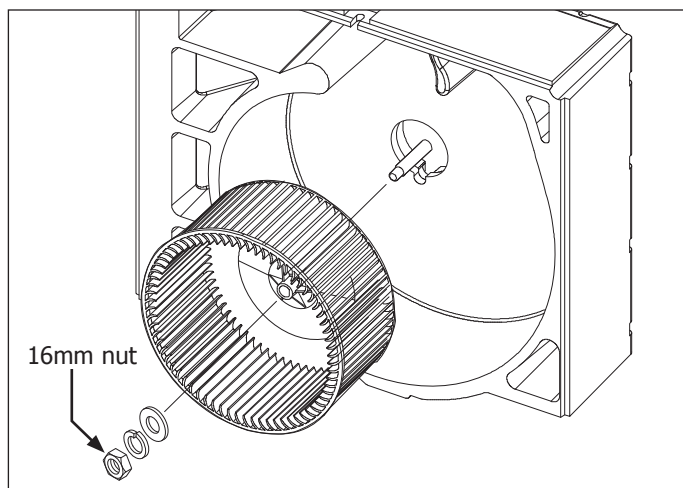


Figure 4-23.

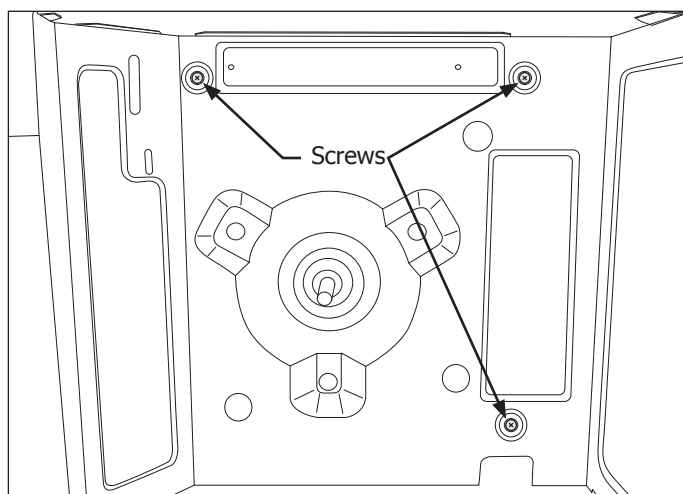


Figure 4-24.

## Section 4 Component Teardown

### Condenser Fan Blade and Shroud Removal

To remove the condenser fan blade and shroud:

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve.
3. Remove the condenser fan assembly from the unit.
4. Use a 13mm socket or wrench and remove the left hand thread nut securing the condenser fan blade to the motor shaft. (See Figure 4-26)
5. Pull the lock washer and washer from the motor shaft, then pull the fan blade from the motor shaft.
6. With the fan blade removed, the condenser fan shroud can be removed from the condenser fan assembly.

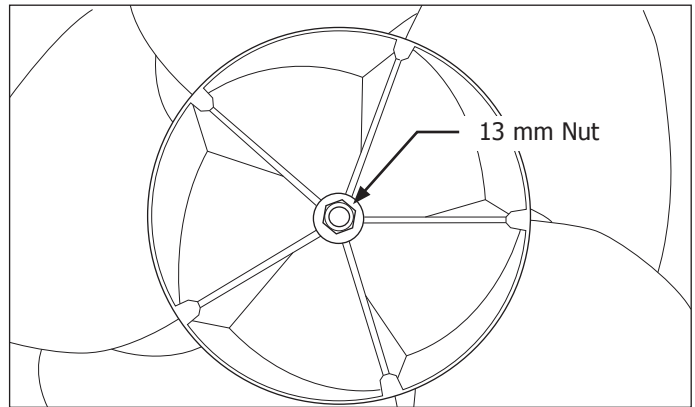


Figure 4-26.

### Fan Motor Removal

To remove the fan motor:

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve.
3. Remove the condenser fan assembly from the unit.
4. Remove the blower wheel and fan blade.
5. Use a 10mm socket or wrench and remove the three nuts securing the condenser fan motor to the right partition bulkhead. Lift condenser off mounting studs. (See Figure 4-27)

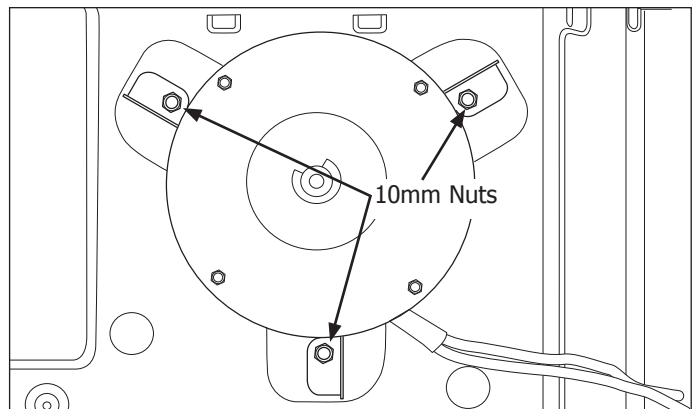


Figure 4-27.

### Compressor Removal

To remove the fan motor:

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve.
3. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
4. Disconnect the compressor inlet line above the accumulator. Disconnect discharge line one inch from the outlet.
5. Use a 13mm socket or wrench and remove the 3 nuts securing the compressor to the unit base. (See Figure 4-28)
6. Remove the compressor electrical components by using an 8mm socket or wrench and remove the nut securing the cover to the top of the compressor.

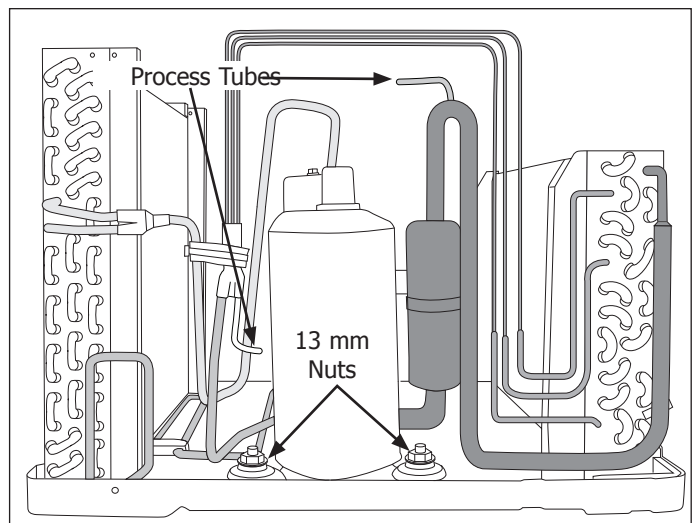


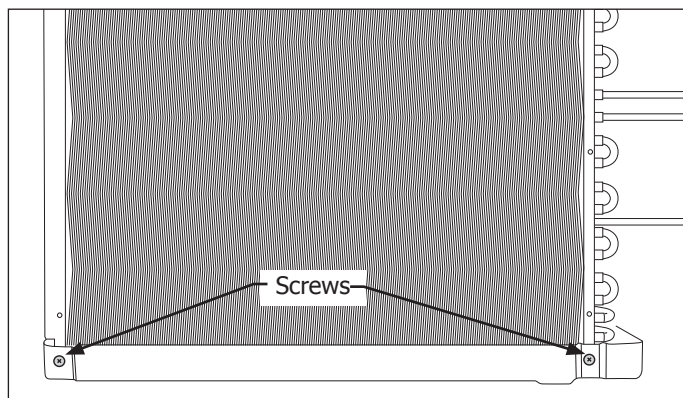
Figure 4-28.

## Section 4 Component Teardown

### Condenser Removal

To remove the condenser:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve.
3. Remove the condenser fan cover.
4. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
5. Disconnect inlet and outlet lines from condenser.
6. Extract the two screws securing the bottom of the condenser to the unit base. (See Figure 4-29)
7. Carefully lift the condenser out from the unit base.

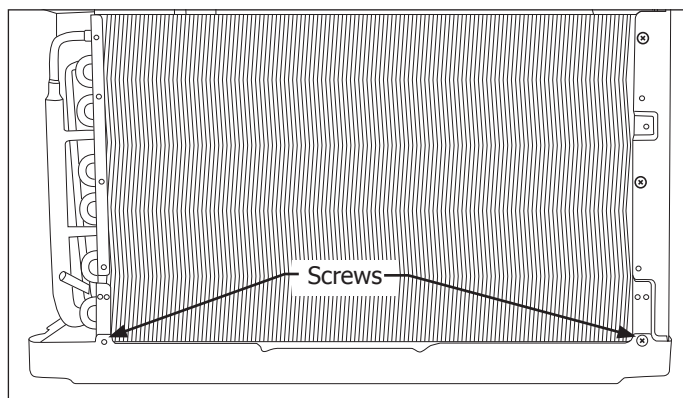


**Figure 4-29.**

### Evaporator Removal

To remove the evaporator:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve.
3. Remove the fan and blower assembly.
4. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
5. Disconnect inlet and outlet lines from evaporator.
6. Extract the two screws securing the bottom front of the evaporator to the unit base. (See Figure 4-30)
7. Carefully lift the evaporator out from the unit base.



**Figure 4-30.**

## Section 4 Component Teardown

### Model FAZ (Medium Duty Slider) Series

The Model FAZ is similar in design and components to the Model FAM and FAS series. The Model FAZ illustrated here has the heat option.

#### NOTE

Due to the number of models within the series, some teardown procedures, such as locations and number of fasteners, and location of electrical system components, may vary from the descriptions given in this section.

Always use the wiring diagram attached to the unit for all electrical connections.

#### Filter And Front Panel Assembly Removal

1. Disconnect the power supply from unit.
2. Open the front grille panel by using both hands, grabbing along the sides of the unit and pulling the top of the front grille panel away from the unit until the retaining tabs release from the front panel. Tilt the front grille panel away from the unit.
3. Grasp the filter in the center and pull out of unit.
4. Remove front grille panel by pulling the front grille panel upwards till the hinges can be pulled out from the slots at the bottom corners of the unit frame.
5. Extract the screw from each side of unit securing the front panel to the unit frame. (See Figure 4-32)
6. Remove the front panel by pulling the front panel outer edges away from the unit frame until the tabs are free of the slots. (See Figure 4-32, Arrows show tab locations) Release the side tabs first then lift the front panel upwards until the front panel is free.

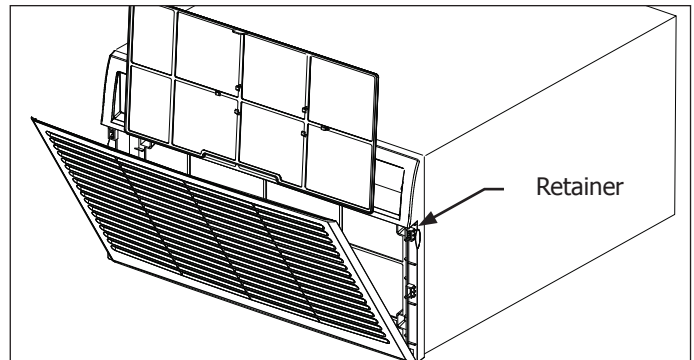


Figure 4-31.

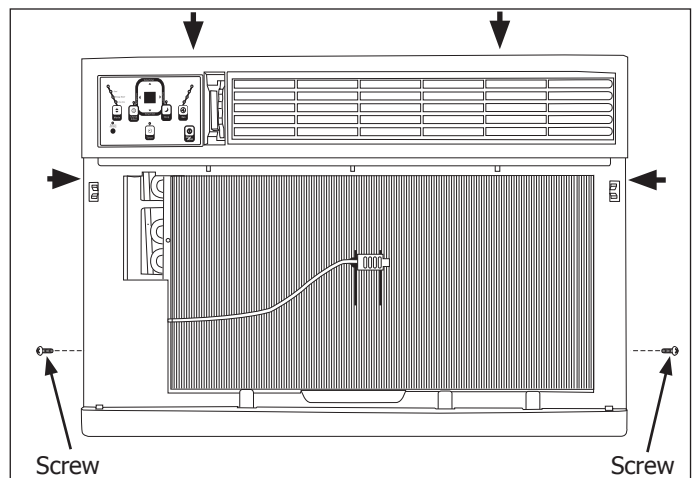


Figure 4-32.

#### Cabinet Wrapper/Sleeve Removal

To remove the cabinet wrapper/sleeve:

1. Disconnect the power supply from unit.
2. Remove the front panel assembly.
3. Extract the two shipping screws securing the cabinet wrapper/sleeve to the unit base.
4. At the front of the unit is a handle to pull the air conditioner assembly from the cabinet wrapper/sleeve. Pull the assembly straight out until free of the cabinet wrapper/sleeve.

#### Control Box Cover Removal

To remove the control box cover:

1. Disconnect power supply from unit.
2. Remove the front panel assembly and cabinet wrapper/sleeve.
3. Extract screw securing the cover to the control box.
4. Lift right side of cover slightly upwards then push to the left to release tab inserted into the control box.

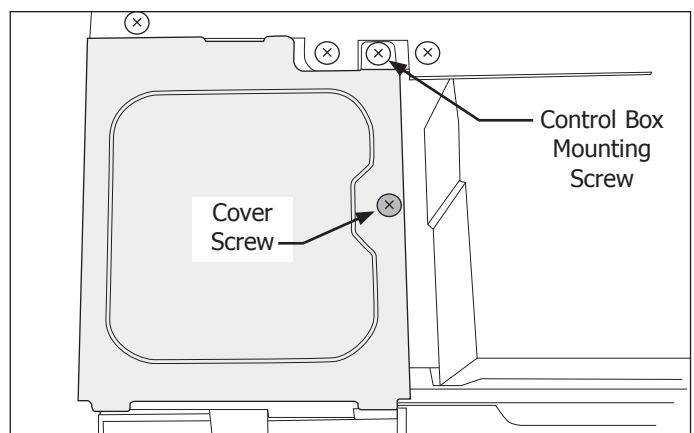


Figure 4-33.



## Section 4 Component Teardown

### User Interface Removal

The user interface is secured with 4 retainers that slide into keyhole slots cut into the face of the control box.

To remove the user interface:

1. Disconnect power supply from unit.
2. Remove the front panel assembly.
3. Remove cabinet wrapper/sleeve then remove control box cover.
4. Lift user interface straight up until retainers can be pulled out of keyhole slots in control box.  
(See Figure 4-34)
5. Disconnect the user interface at control board.
6. Remove the control board by extracting the 4 screws from the back of the user interface. Separate the front and back sections and remove control board.

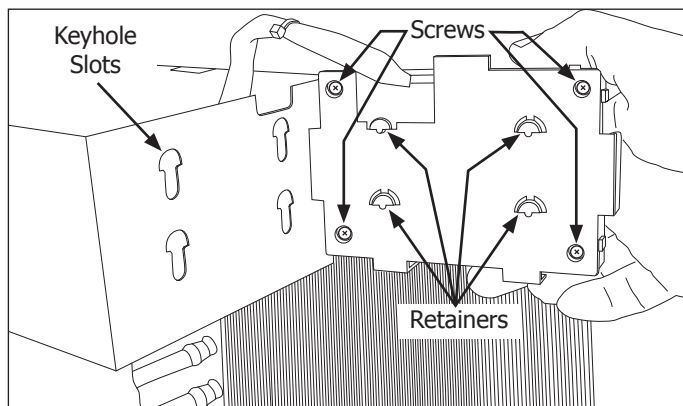


Figure 4-34.

### Control Box Removal

The control box is secured to the unit frame with 4 screws, two at the top of the control box, two along the left edge and one beneath the control box. Screws securing some of the components within the control box can only be accessed with the 4 screws removed and the control box pulled away from the unit.

To remove the control box from its installation:

1. Disconnect power supply from unit.
2. Remove the front panel assembly.
3. Remove cabinet wrapper/sleeve, then remove control box cover.
4. Remove the screw at the top and the three screws along the left side securing the control box assembly to the unit frame. (See Figure 4-35)

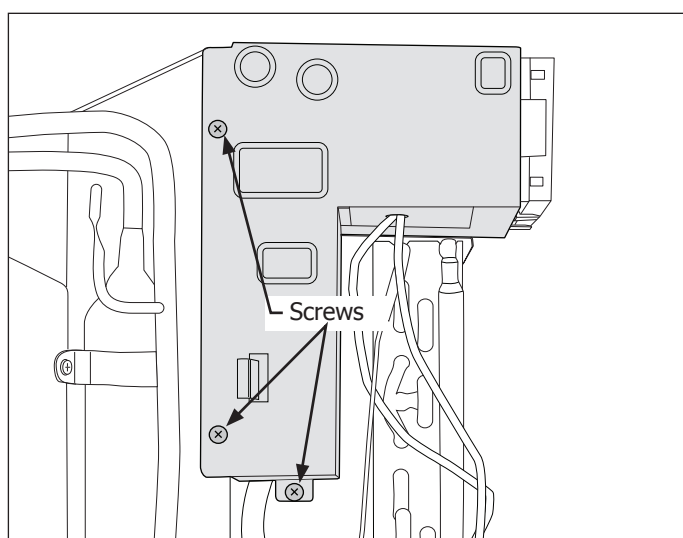


Figure 4-35.

### Power Cord Removal

5. Pull the control box assembly off unit and carefully rotate the assembly until the power cord screws are accessible.
6. disconnect the black and white wire leads from the control board.
7. Extract the two screws securing the power cord to the control box.
8. Extract the screw securing the power cord ground wire to control box. Remove power cord from unit.  
(See Figure 4-36)

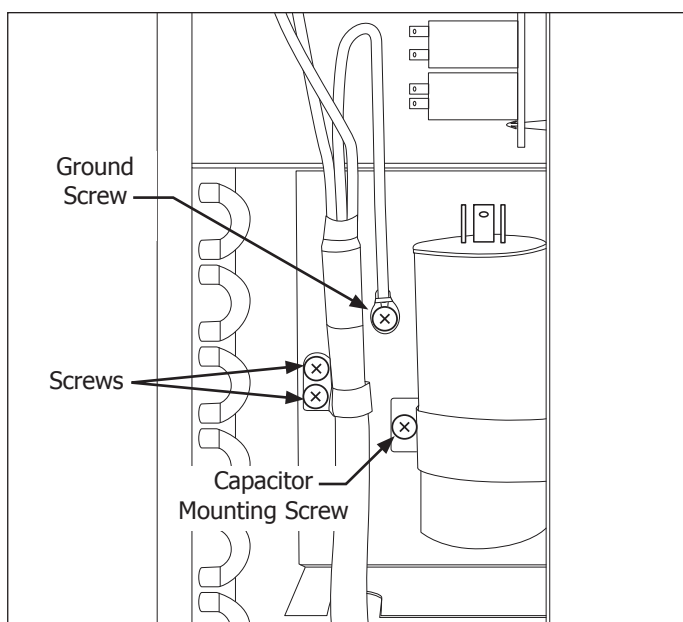


Figure 4-36.



## Section 4 Component Teardown

### Capacitor Removal

To remove the capacitor:

1. Disconnect power supply from unit.
2. Remove cabinet wrapper/sleeve then remove control box cover.
3. Extract control box assembly mounting screws, then pull away and rotate to access capacitor.

#### CAUTION

To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.

4. Discharge capacitor.
5. Disconnect wire leads from capacitor.
6. Extract screw from retainer securing the capacitor to the control box assembly. Pull capacitor from unit. (See Figure 4-36)

### Fan Motor Capacitor Removal

To remove the capacitor:

1. Disconnect power supply from unit.
2. Remove cabinet wrapper/sleeve then remove control box cover.
3. Extract control box assembly mounting screws, then pull away and rotate to access fan motor capacitor.
4. Disconnect wire leads from capacitor.
5. Extract screw securing fan motor capacitor to control box assembly. (See Figure 4-38)

### Transformer Removal

To remove the transformer:

1. Disconnect power supply from unit.
2. Remove cabinet wrapper/sleeve then remove control box cover.
3. Extract control box assembly mounting screws, then pull away from unit.
4. Disconnect wire leads from control board leading to the transformer. (See Figure 4-37)
5. From the underside of the control box assembly, extract screws securing the transformer to the control box assembly.

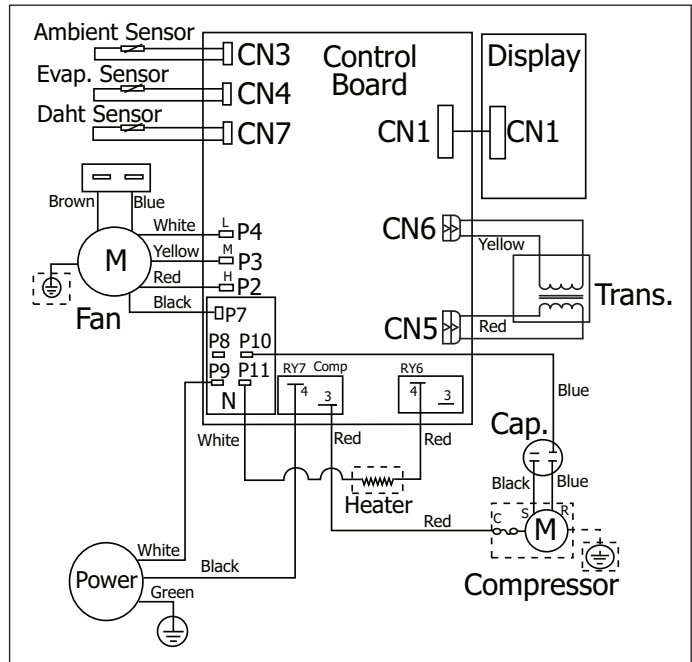


Figure 4-37.

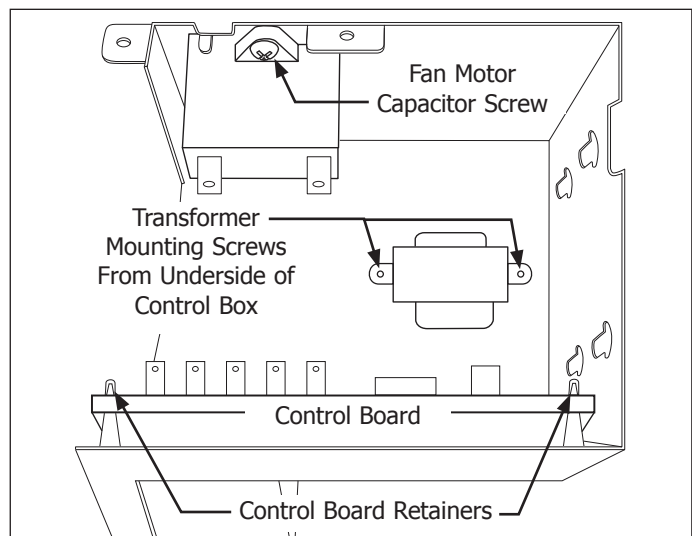


Figure 4-38.

### Control Board Removal

To remove the control board:

1. Disconnect power supply from unit.
2. Remove cabinet wrapper/sleeve then remove control box cover.
3. Extract control box assembly mounting screws, then pull away from unit.
4. Disconnect all wire leads from control board.
5. Release the plastic control board retainers then pull control board from control box. (See Figure 4-38)

## Section 4 Component Teardown

### Thermistor Removal

There are three thermistors on units equipped with a heating element.

#### To remove the ambient thermistor:

1. Disconnect power supply from unit.
2. Remove cabinet wrapper/sleeve then remove control box cover.
3. Disconnect thermistor wire leads at control board.
4. Pull thermistor assembly from evaporator.
5. Release the retaining tabs on thermistor assembly, then pull thermistor out from the retainers.

#### To remove the evaporator thermistor:

4. Follow steps 1-3 above.
5. Pull thermistor from the tube located on the copper tubing and remove from unit.

#### To remove the heat duct thermistor:

4. Follow steps 1-3 above.
5. Remove insulation from top of blower housing.
6. Pull thermistor assembly from top of blower housing and remove from unit.

### Blower Cover and Condenser Cover Removal

The blower cover and condenser cover have braces that span the open area above the condenser fan and blower assembly.

To remove the blower cover and condenser fan cover:

1. Disconnect power supply from unit.
2. Remove cabinet wrapper/sleeve.
3. Extract the screws securing the braces to the blower and condenser covers. Remove braces from unit. (See Figure 4-40)
4. Extract the screws securing the blower and condenser covers to the unit. Lift covers off unit.

### Top Scroll Cover and Duct Thermistor Removal

To remove the top scroll cover and duct thermistor:

1. Disconnect power supply from unit.
2. Remove cabinet wrapper/sleeve and control box cover.
3. Remove braces and blower cover.
4. Disconnect duct thermistor wire leads from control board. (See Figure 4-41)
5. Remove insulation covering thermistor wires. Pull thermistor assembly from top scroll cover. The top scroll cover may now be removed from the unit.

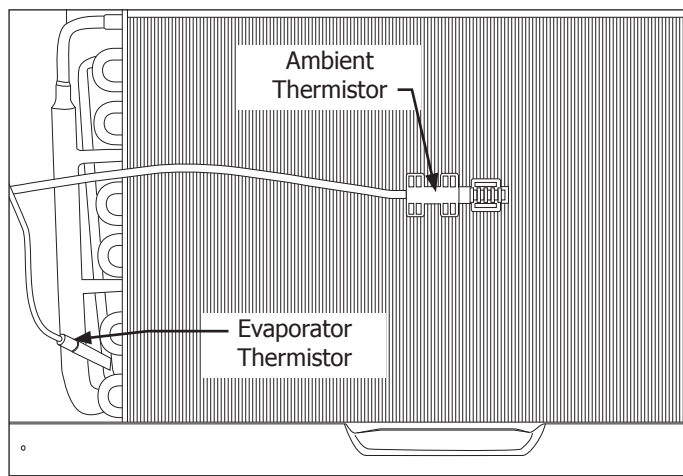


Figure 4-39.

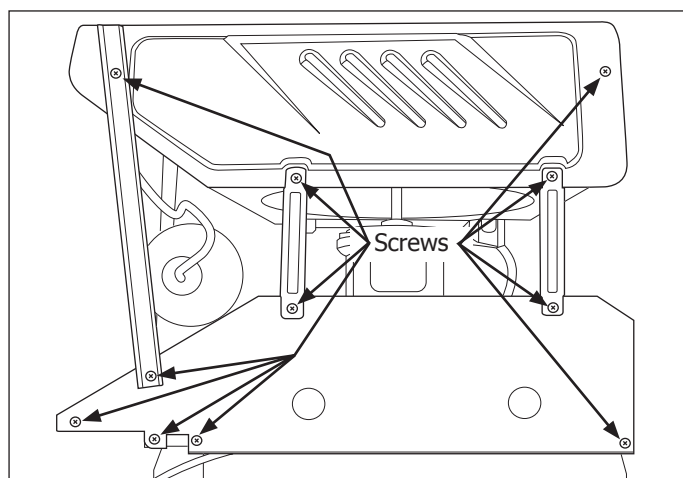


Figure 4-40.

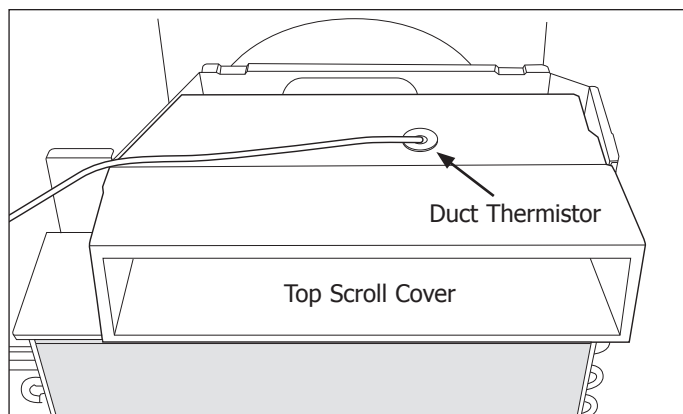


Figure 4-41.

## Section 4 Component Teardown

### Front Scroll Cover And Heater Assembly Removal

The heater assembly is mounted to the inside of the front scroll cover. The front scroll cover is then mounted to the evaporator assembly and to the front bulkhead partition.

To remove the front scroll cover heater assembly:

1. Disconnect power supply from unit.
2. Remove cabinet wrapper/sleeve then remove control box.
3. Remove the braces and blower cover, and the top scroll cover.
4. Disconnect wire leads from control box leading to the heater assembly.
5. Extract the 4 screws from each side of the evaporator securing the front scroll cover to the evaporator and front bulkhead partition. (See Figure 4-42)
6. Carefully pull evaporator an inch away from the front scroll cover to allow the front scroll cover to be pulled from the unit base. Use caution not to kink or rupture the sealed system tubing.
7. Pull front scroll cover with heater assembly from unit base.
8. Lay the heater and front scroll cover on a flat surface and extract the two screws securing the heater assembly to the front scroll cover. (See Figure 4-43)
9. Slide heater assembly to the left until the metal legs are free of the retaining slots then pull heater assembly off of front scroll cover.

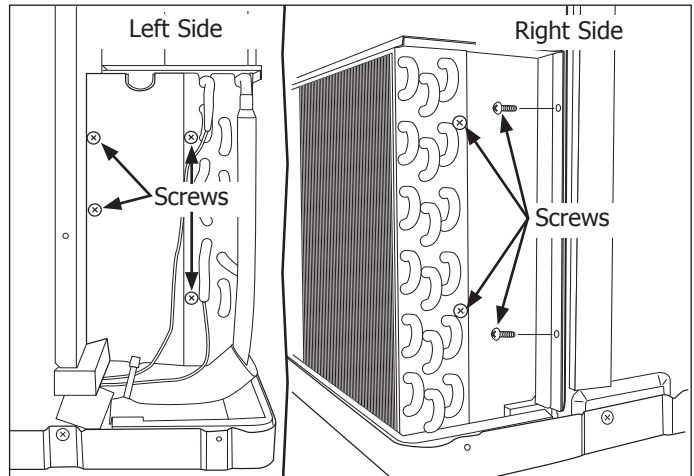


Figure 4-42.

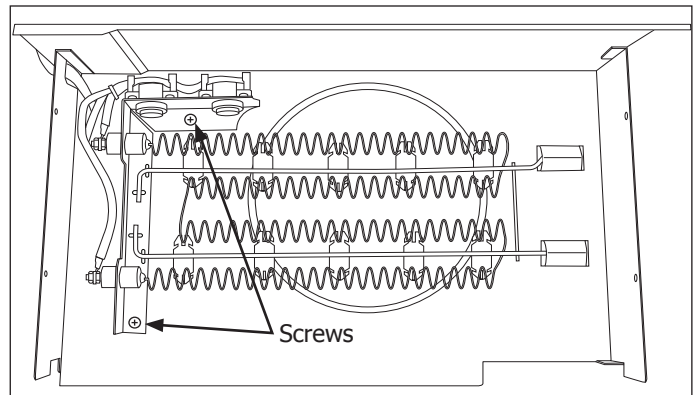


Figure 4-43.

### NOTE

If the thermal limiter and/or the thermostat are defective, the entire heater assembly must be replaced.

## Section 4 Component Teardown

### Blower Wheel Removal

To remove the blower:

1. Disconnect power supply from unit.
2. Remove cabinet wrapper/sleeve then remove control box.
3. Remove the braces and blower cover, and the top scroll cover.
4. Disconnect wire leads from control box leading to the heater assembly, then remove front scroll cover and heater assembly.
5. Use a 13 mm extended socket to remove the nut from the blower. (See Figure 4-44)
6. Remove lock washer, washer and blower wheel from motor shaft.

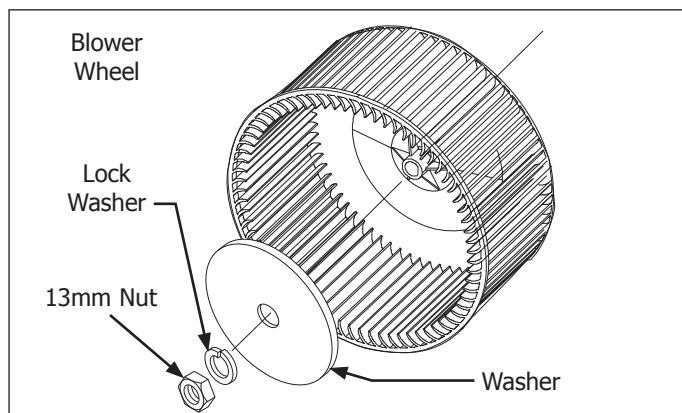


Figure 4-44.

### Condenser Fan Blade and Shroud Removal

To remove the condenser fan blade and shroud:

1. Disconnect power supply from unit.
2. Remove cabinet wrapper/sleeve, then remove control box cover.
3. Remove the braces and condenser fan cover.
4. Extract the two screws at the bottom corners securing the condenser to the unit base tray. Carefully lift the condenser over the base tray using care not to kink or rupture the sealed system. (See Figure 4-45)
5. Use a 10 mm extended socket to remove the left hand thread nut securing the condenser fan blade to the fan motor shaft. (See Figure 4-46)
6. Remove lock washer, washer and condenser fan blade from motor shaft.
7. Extract the two screws from each side of the condenser securing the condenser fan shroud to the outer edges of the condenser. Extract the two screws securing the condenser shroud to the unit base tray. Remove condenser fan shroud from unit. (See Figure 4-47)

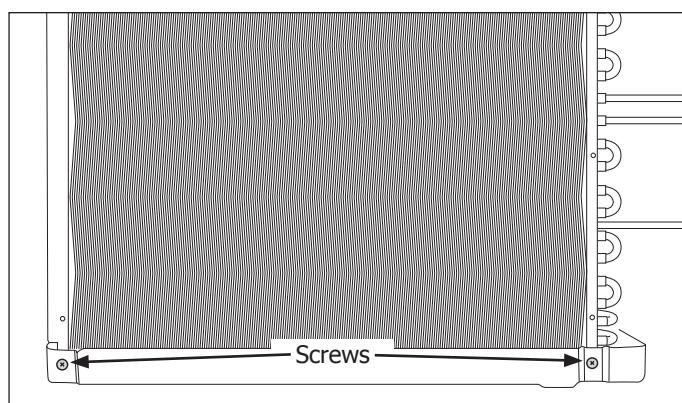


Figure 4-45.

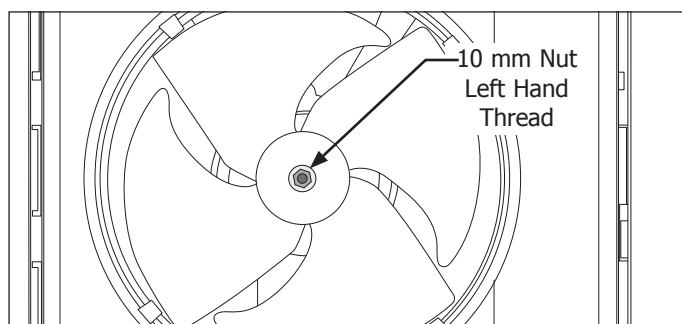


Figure 4-46.

### Drain Valve Removal

The drain valve is located between the condenser and the condenser fan shroud.

To remove the drain valve:

1. Disconnect power supply from unit.
2. Remove cabinet wrapper/sleeve, then remove condenser fan blade and shroud.
3. Extract the two screws securing the drain valve to the unit base. (See Figure 4-48)

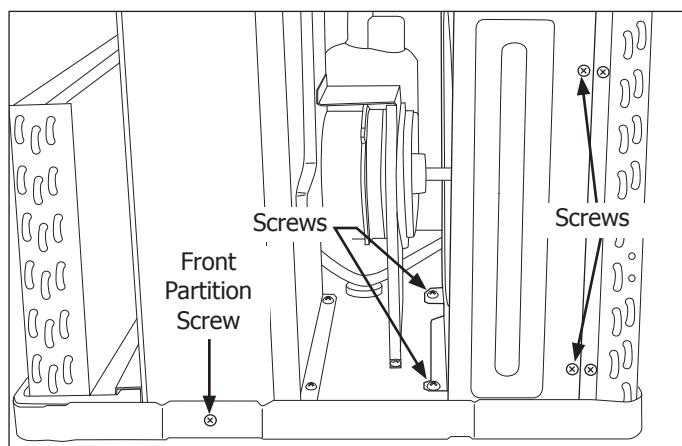


Figure 4-47.

## Section 4 Component Teardown

### Front Partition and Rear Scroll Housing Removal

The front partition must be removed to access the condenser fan mounting bolts that are located behind the rear scroll housing.

To remove the front partition and rear scroll housing:

1. Disconnect power supply from unit.
2. Remove cabinet wrapper/sleeve then remove control box. Disconnect condenser fan motor wire leads from control board.
3. Remove the braces and blower cover, and the top scroll cover.
4. Remove front scroll cover and heater assembly.
5. Remove blower, condenser fan blade and condenser shroud.
6. Extract the screw from each side of the base tray securing the front partition to the unit base.
7. Extract the five screws securing the front partition to the unit base. (See Figure 4-49)
8. Lift front partition up slightly then pull front partition towards the right until free of the sealed system tubing. Remove from unit.
9. The rear scroll housing can now be pulled from the front partition.

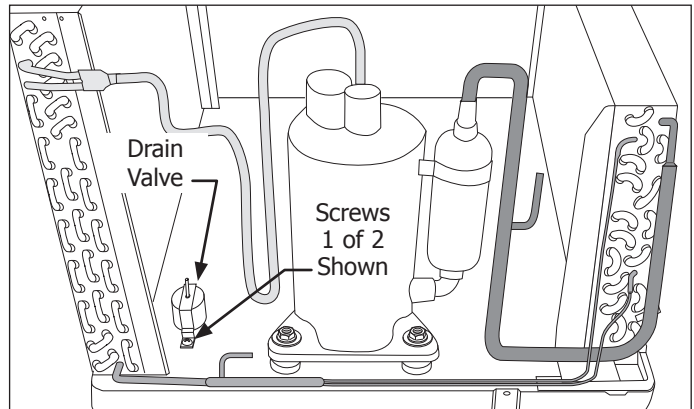


Figure 4-48.

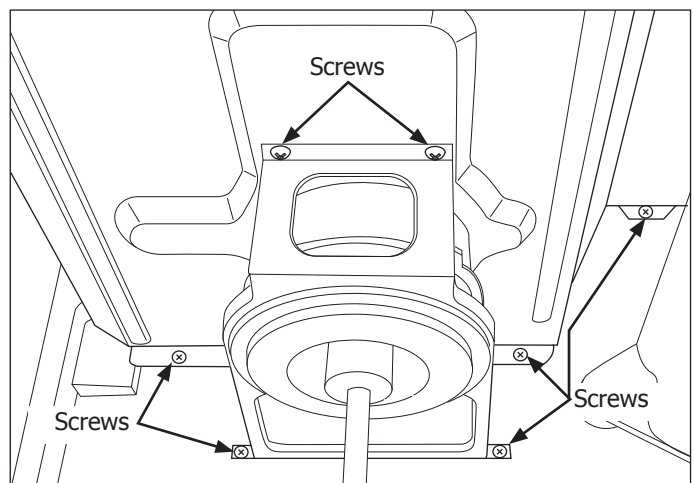


Figure 4-49.

### Condenser Fan Motor Removal

To remove the condenser fan motor:

1. Disconnect power supply from unit.
2. Remove cabinet wrapper/sleeve then remove control box. Disconnect condenser fan motor wire leads from control board.
3. Remove the braces and blower cover, and the top scroll cover.
4. Remove front scroll cover and heater assembly.
5. Remove blower, condenser fan blade and condenser shroud.
6. Remove the front partition and rear scroll housing.
7. Extract the two screws securing the condenser mounting bracket to the front partition.
8. Use a 7mm socket or wrench and remove the four nuts securing the condenser fan motor to the front partition. Pull condenser fan motor from front partition. (See Figure 4-50)

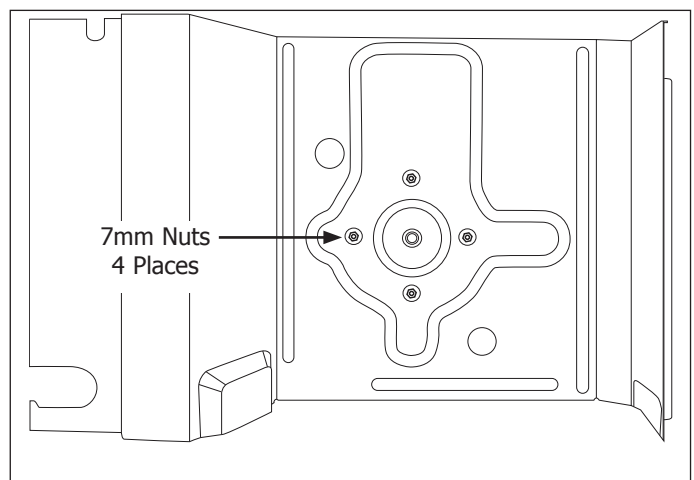


Figure 4-50.



## Section 4 Component Teardown

### Condenser Removal

To remove the condenser:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve.
3. Remove the condenser cover.
4. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
5. Disconnect inlet and outlet lines from condenser.
6. Extract the two screws securing the bottom of the condenser to the unit base. (See Figure 4-51)
7. Carefully lift the condenser out from the unit base.

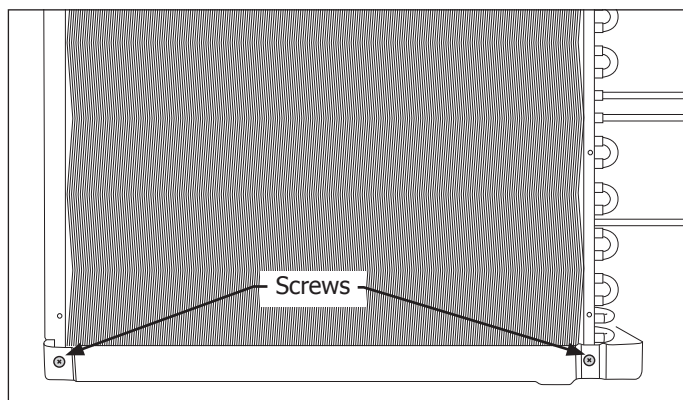


Figure 4-51.

### Evaporator Removal

To remove the evaporator:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve.
3. Remove the front scroll and heater assembly.
4. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank. (See Figure 4-52 and 4-53)
5. Disconnect inlet and outlet lines from evaporator.
6. Carefully lift the evaporator out from the unit base.

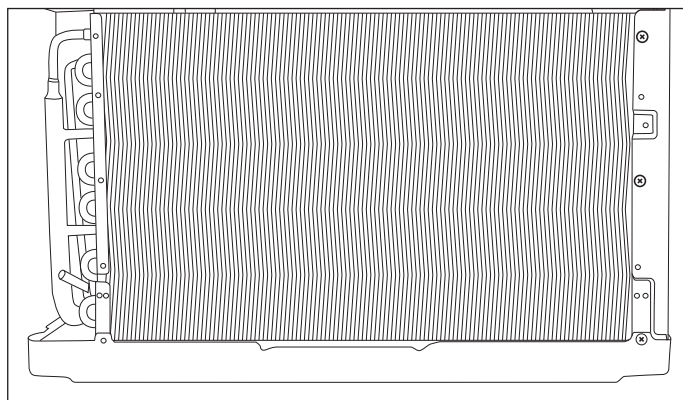


Figure 4-52.

### Compressor Removal

To remove the fan motor:

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve.
3. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank. (See Figure 4-53)
4. Disconnect the compressor inlet line above the accumulator. Disconnect discharge line one inch from the outlet.
5. Use a 13mm socket or wrench and remove the 3 nuts securing the compressor to the unit base.
6. Remove the compressor electrical components by using an 8mm socket or wrench and remove the nut securing the cover to the top of the compressor.

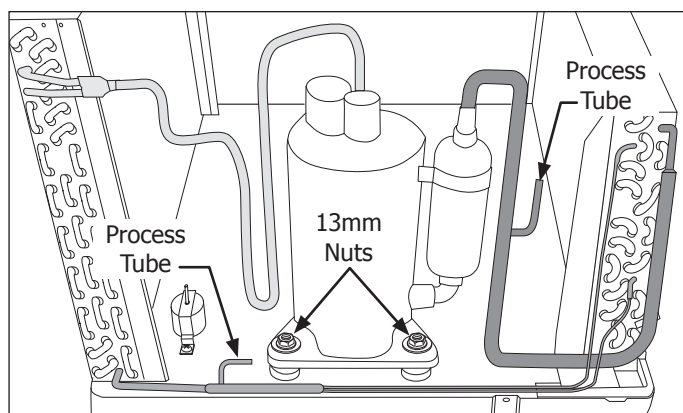


Figure 4-53.

## Section 4 Component Teardown

### Model FAH (Thru the Wall) Series

#### NOTE

Due to the number of models within the series, some teardown procedures, such as locations and number of fasteners, and location of electrical system components, may vary from the descriptions given in this section.

Always use the wiring diagram attached to the unit for all electrical connections.

#### Filter And Front Panel Assembly Removal

1. Disconnect the power supply from unit.
2. Grab filter handle at top center of the front grille. Pull out, then upwards to remove filter. (See Figure 4-54)
3. Extract the two screws securing the front panel to the unit. Screws are visible with the filter removed. (See Figure 4-55)
4. Using a putty knife, carefully pry out the side and top retaining clips from the slots cut in the cabinet wrapper. (See Figure 4-55, Arrows show tab locations)
5. Pull front panel from front of unit

#### Cabinet Wrapper/Sleeve Removal

To remove the cabinet wrapper/sleeve:

1. Disconnect the power supply from unit.
2. Remove the front panel assembly.
3. Extract the screws from each side of unit. Extract the screws securing the fan guard and cabinet wrapper/sleeve to the back of the unit. Remove fan guard from back of unit. (See Figure 4-56)
4. Lift cabinet wrapper/sleeve off of the unit.

#### User Interface Removal

To remove the user interface:

1. Disconnect power supply from unit.
2. Remove the front panel assembly.
3. Disconnect wire harness at disconnect.
4. Extract the four screws securing user interface to front panel. (See Figure 4-57)
5. Remove the user interface board by extracting the 4 screws securing the board to the housing. (See Figure 4-58)

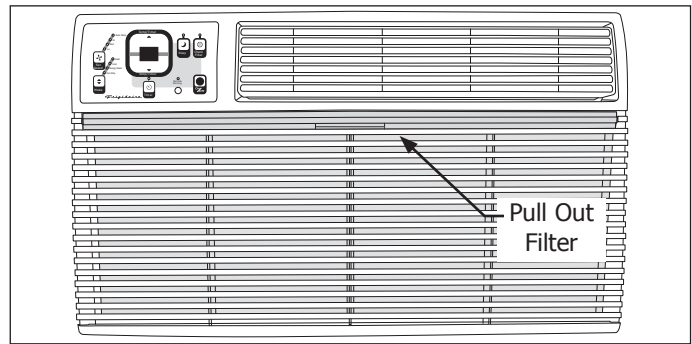


Figure 4-54.

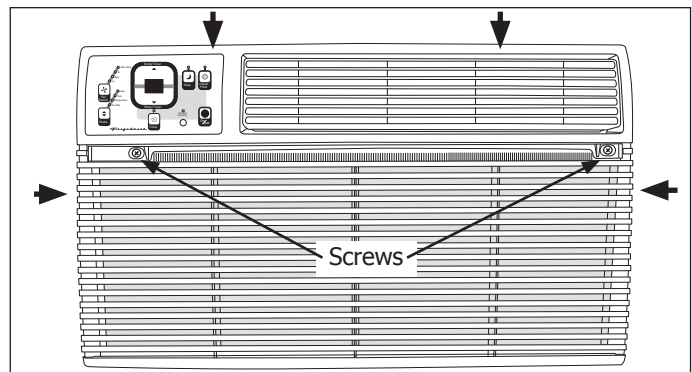


Figure 4-55.

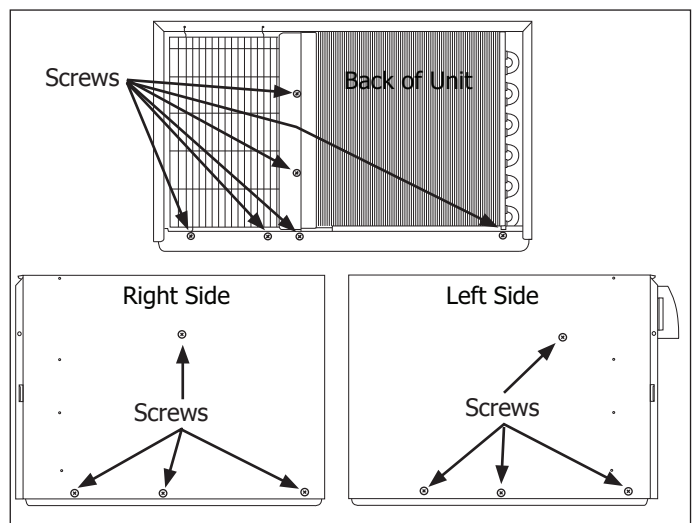


Figure 4-56.

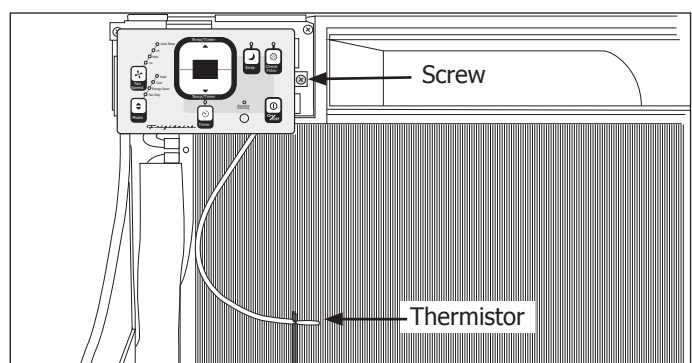


Figure 4-57.



## Section 4 Component Teardown

### Control Box Component Removal

The control box houses the control board, capacitor and terminal block. The power cord enters the control box along the left side and is held in position with a grommet.

1. Disconnect the power supply from unit.
2. Remove front panel and cabinet wrapper/sleeve.
3. Discharge capacitor.

#### **CAUTION**

To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.

#### To remove the capacitor:

4. Extract the screw securing the retaining band to bottom of control box. (See Figure 4-59)
5. Disconnect all wire leads from capacitor. Label as needed for proper reconnection.

#### To remove power cord:

6. Disconnect white wire from terminal block.
7. Disconnect black wire from control board.
8. Extract ground screw securing green wire to bottom of control box. (See Figure 4-59)

#### To remove terminal block:

9. Disconnect all wire leads from terminal block. Label as needed for proper reconnection.
10. Extract screw securing terminal block to bottom of control box. (See Figure 4-59)

#### To remove thermistors:

11. Remove any wire retainers securing the thermistor wire leads. Disconnect thermistor leads at control board and remove from unit.

#### To remove the control board:

12. Disconnect all wire leads from control board. Label as needed for proper reconnection.
13. Compress the plastic retainers securing the control board to the front of the control box and remove from unit.

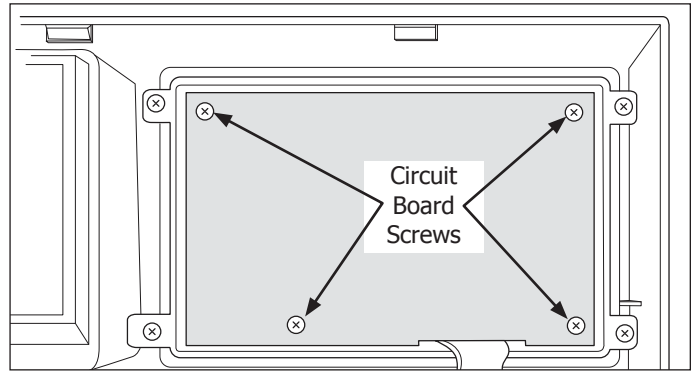


Figure 4-58.

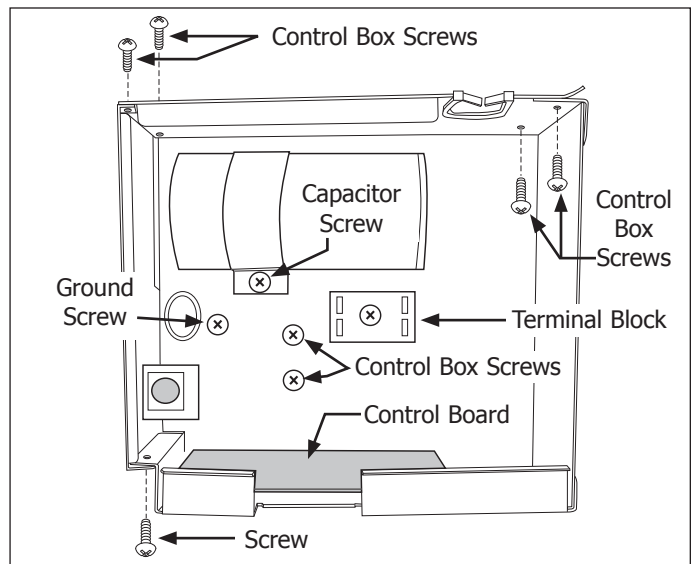


Figure 4-59.

**NOTE:** Wires omitted for clarity.

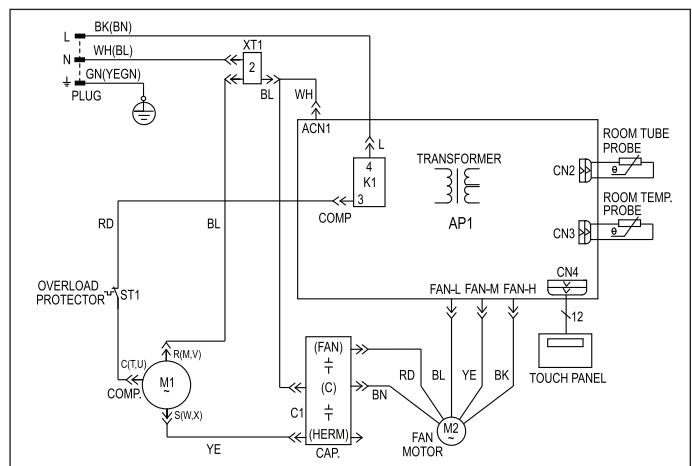


Figure 4-60.

## Section 4 Component Teardown

### Control Box Component Removal (Heater Equipped Models)

The control box houses the control board, fan motor capacitor, transformer and terminal block. The power cord enters the control box along the left side and is held in position with a grommet.

1. Disconnect the power supply from unit.
2. Remove front panel and cabinet wrapper/sleeve.
3. Extract the two screws from the left side and the screw at the top right rear corner securing the cover to control box. Remove cover from unit.  
(See Figure 4-61)
4. Discharge capacitor.

#### CAUTION

To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.

#### To remove power cord:

5. Extract the two screws securing the power cord to the bottom front of the unit tray.
6. Disconnect black wire from terminal block.
7. Disconnect white wire from control board.
8. Extract ground screw securing green wire to the rear of the control box. (See Figure 4-62)

#### To remove terminal block:

9. Disconnect wire leads from fan motor capacitor.
10. Extract screw securing fan motor capacitor to right side wall of control box. (See Figure 4-62)

#### To remove fan motor capacitor:

11. Disconnect all wire leads from terminal block.
12. Extract screw securing terminal block to bottom of control box. (See Figure 4-62)

#### To remove transformer:

13. Disconnect wire leads from transformer at control board.
14. From rear of control box, extract the screws securing transformer to control box. (See Figure 4-62)

#### To remove thermistors:

15. Remove any wire retainers securing the thermistor wire leads. Disconnect thermistor leads at control board and remove from unit.

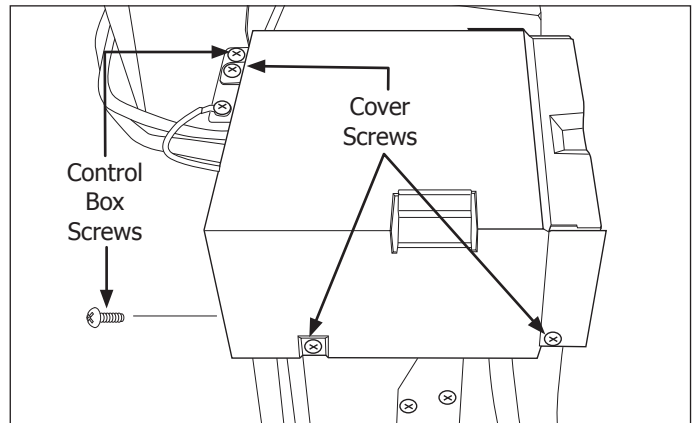


Figure 4-61.

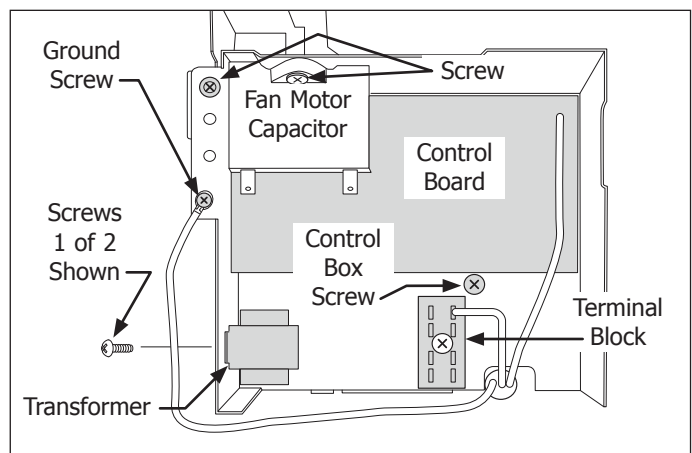


Figure 4-62.

#### To remove the control board:

16. Disconnect all wire leads from control board. Label as needed for proper reconnection.
17. Compress the plastic retainers securing the control board to the front of the control box and remove from unit.

### Control Box Removal

To remove the control box:

1. Disconnect the power supply from unit.
2. Remove front panel and cabinet wrapper/sleeve.
3. Remove control box cover.
4. Remove wire ties and disconnect the compressor, condenser fan motor and electric heater wire leads from the control box components.
5. Extract the screw from the floor of the control box securing the assembly to the unit frame. Extract the screw from the top right corner and the screw from the lower left rear corner. (See Figure 4-62)
6. Carefully pull control box off of the unit.

### Front Blower Housing And Heater Assembly Removal (Heater Equipped Models)

To remove the front blower housing and heater assembly:

1. Disconnect the power supply from unit.
2. Remove front panel and cabinet wrapper/sleeve.
3. Remove the control box. Remove wire leads for the duct thermistor at the control board.
4. Cut insulation to free front blower housing from the rear section of the blower housing.
5. Carefully pull front blower housing upwards while feeding the heater wire harness through the access hole until free of the evaporator.
6. Extract two screws from each side of the evaporator securing the heater assembly and front scroll cover to the evaporator flange. (See Figure 4-63)
7. Pull the heater assembly and front scroll cover upwards until free of evaporator. There may be insulation glue between the evaporator and front scroll cover. Be sure to replace the insulation when reassembling the unit.
8. Lay the heater and front scroll cover on a flat surface and extract the two screws securing the heater assembly to the front scroll cover. (See Figure 4-64)
9. Slide heater assembly to the left until the metal legs are free of the retaining slots then pull heater assembly off of front scroll cover.

#### NOTE

If the thermal limiter and/or the thermostat are defective, the entire heater assembly must be replaced.

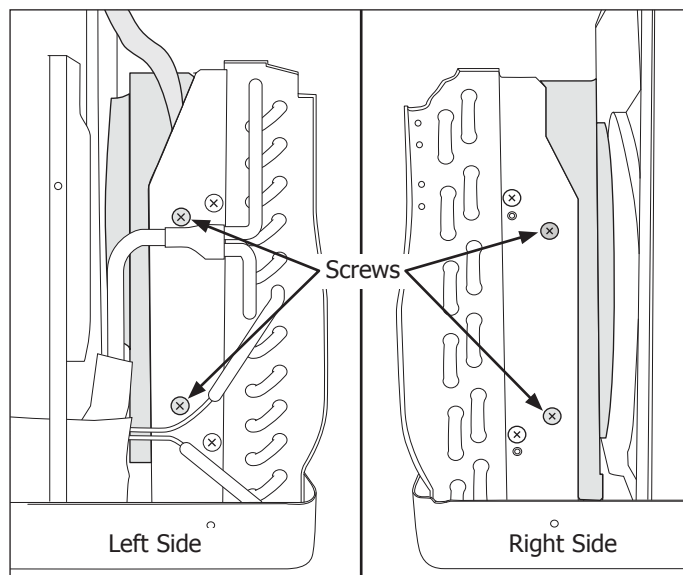


Figure 4-63.

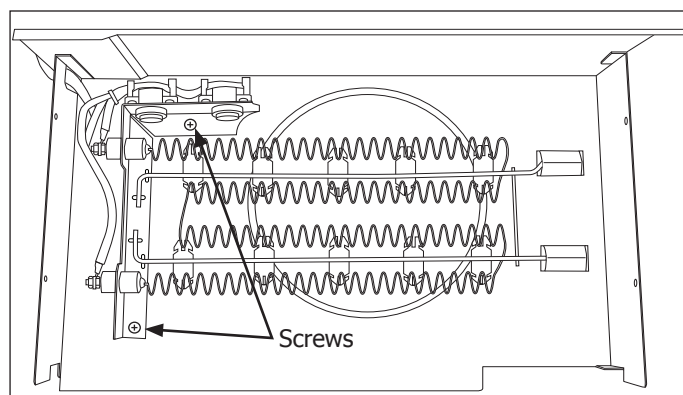


Figure 4-64.

## Section 4 Component Teardown

### Top Condenser Fan Cover Removal

1. Disconnect the power supply from unit.
2. Remove front panel and cabinet wrapper/sleeve.
3. Pull condenser fan cover off condenser assembly.

### Condenser Fan Shroud/ Fan and Blower Assembly Removal

To remove the condenser fan shroud with the fan and blower assembly:

1. Disconnect the power supply from unit.
2. Remove front panel and cabinet wrapper/sleeve.
3. Pull condenser fan cover off condenser assembly.
4. Disconnect the compressor and condenser fan motor wire harness connections from the control box components. Free wire harness from condenser fan shroud.
5. Extract screw from back side of bulkhead that secures the condenser fan shroud to the bulkhead. (See Figure 4-65)
6. Extract the three screws along the left side of the condenser securing the condenser fan shroud in position. (See Figure 4-66)
7. Pull the condenser fan shroud with the fan and blower assembly upwards from the unit base and remove from unit.

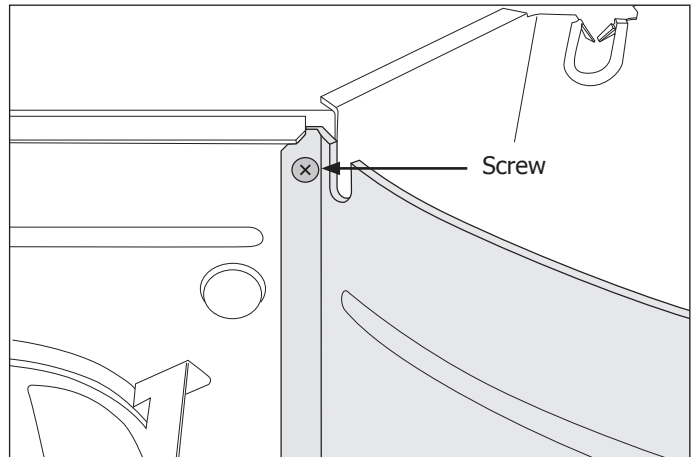


Figure 4-65.

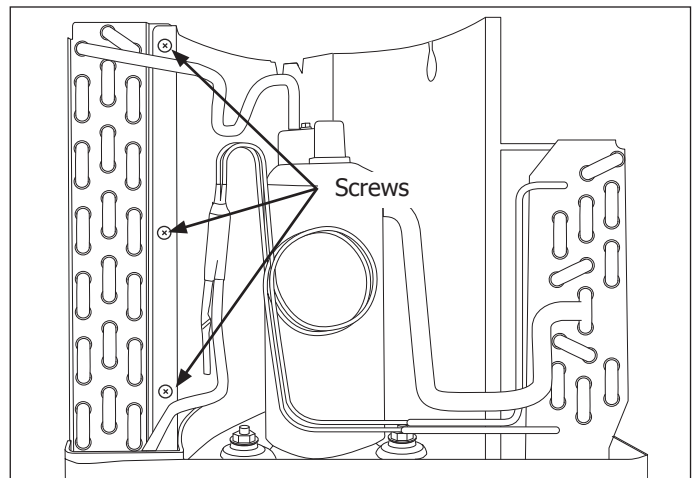


Figure 4-66.

### Fan And Blower Assembly Breakdown

To remove the blower wheel:

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve.
3. Remove the condenser fan assembly from the unit. Remove the front styrofoam section of the air duct.
4. Use a 16mm socket or wrench and remove the nut securing the blower wheel to the motor shaft. Pull the lock washer and washer off shaft, then pull blower wheel off shaft. (See Figure 4-67)
5. The rear section of the styrofoam air duct may now be removed from the bulkhead partition.

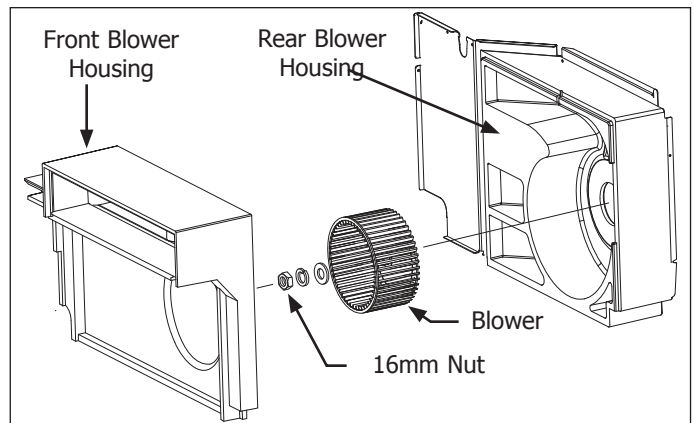


Figure 4-67.

## Section 4 Component Teardown

### Condenser Fan Blade and Shroud Removal

To remove the condenser fan blade and shroud:

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve.
3. Remove the condenser fan assembly from the unit.
4. Use a 13 mm socket or wrench and remove the left hand thread nut securing the condenser fan blade to the motor shaft. (See Figure 4-68)
5. Pull the lock washer and washer from the motor shaft, then pull the fan blade from the motor shaft.
6. With the fan blade removed, the condenser fan shroud can be removed from the condenser fan assembly.

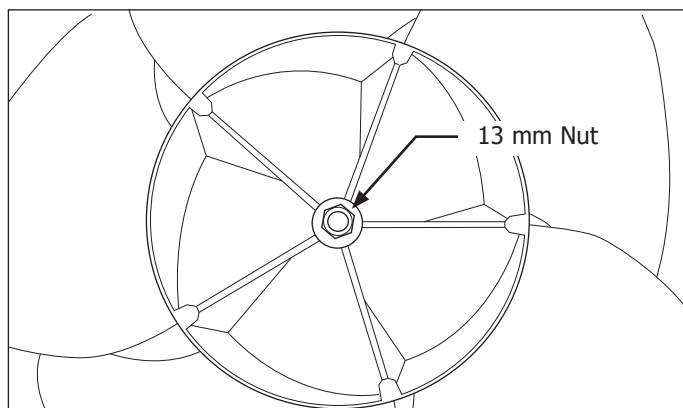


Figure 4-68.

### Fan Motor Removal

To remove the fan motor:

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve.
3. Remove the condenser fan assembly from the unit.
4. Remove the blower wheel and fan blade.
5. Use a 10 mm socket or wrench and remove the three nuts securing the condenser fan motor to the right partition bulkhead. Lift condenser off mounting studs. (See Figure 4-69)

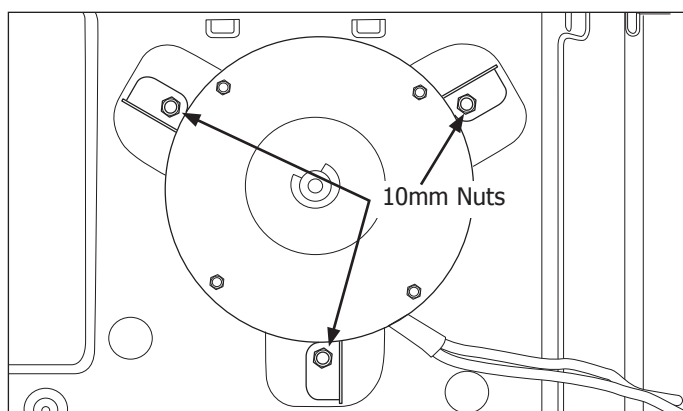


Figure 4-69.

### Compressor Removal

To remove the compressor:

1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve.
3. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank. (See Figure 4-70)
4. Disconnect the compressor inlet line above the accumulator. Disconnect discharge line one inch from the outlet.
5. Use a 13 mm socket or wrench and remove the 3 nuts securing the compressor to the unit base.
6. Remove the compressor electrical components by using an 8 mm socket or wrench and remove the nut securing the cover to the top of the compressor.

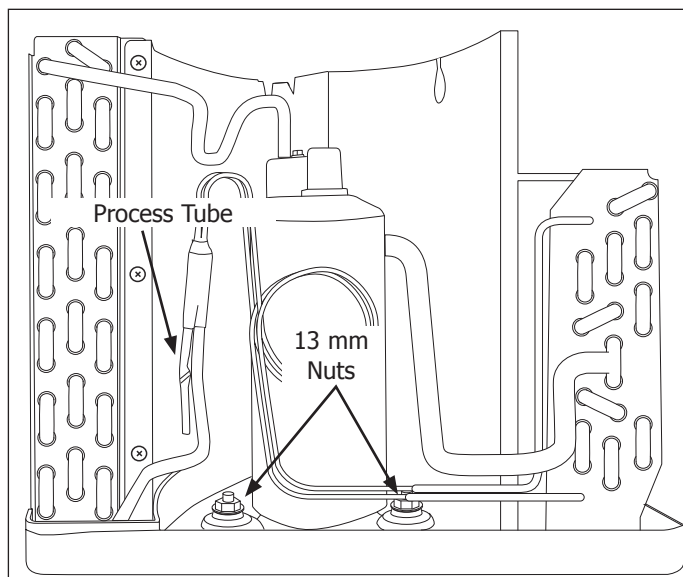


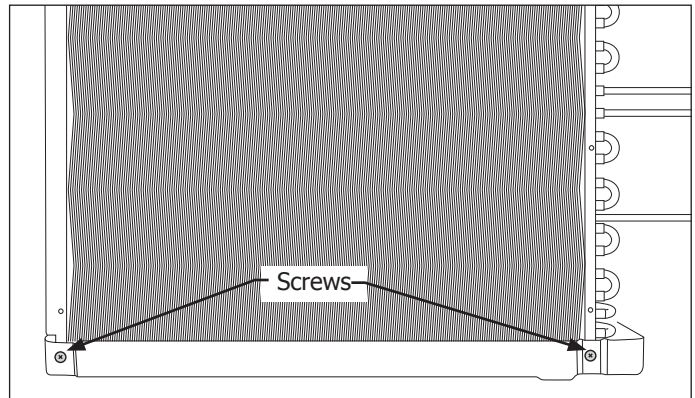
Figure 4-70.

## Section 4 Component Teardown

### Condenser Removal

To remove the condenser:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve.
3. Remove the condenser fan cover.
4. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
5. Disconnect inlet and outlet lines from condenser.
6. Extract the two screws securing the bottom of the condenser to the unit base. (See Figure 4-71)
7. Carefully lift the condenser out from the unit base.

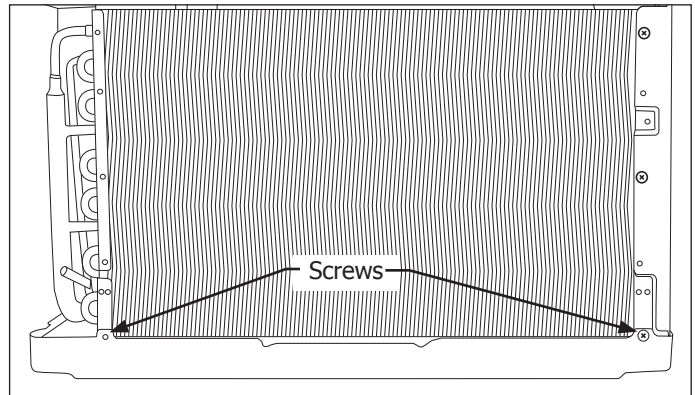


**Figure 4-71.**

### Evaporator Removal

To remove the evaporator:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve.
3. Remove the fan and blower assembly.
4. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
5. Disconnect inlet and outlet lines from evaporator.
6. Extract the two screws securing the bottom front of the evaporator to the unit base. (See Figure 4-72)
7. Carefully lift the evaporator out from the unit base.



**Figure 4-72.**



## Section 4 Component Teardown

### Model FAK ( Slider/Casement) Series

#### NOTE

Due to the number of models within the series, some teardown procedures, such as locations and number of fasteners, and location of electrical system components, may vary from the descriptions given in this section.

Always use the wiring diagram attached to the unit for all electrical connections.

#### Filter And Front Panel Assembly Removal

1. Disconnect the power supply from unit.
2. Grab filter handle at top center of the front grille. Pull out, then upwards to remove filter.
3. Extract the four screws securing the front panel to the cabinet wrapper/sleeve. (See Figure 4-73)
4. Using a putty knife, carefully pry out the side and top retaining clips from the slots cut in the cabinet wrapper. (See Figure 4-73, Arrows show tab locations)
5. Pull front panel carefully from front of unit until the user interface connection can be accessed. Disconnect user interface from wire harness. Front panel is now free from unit.

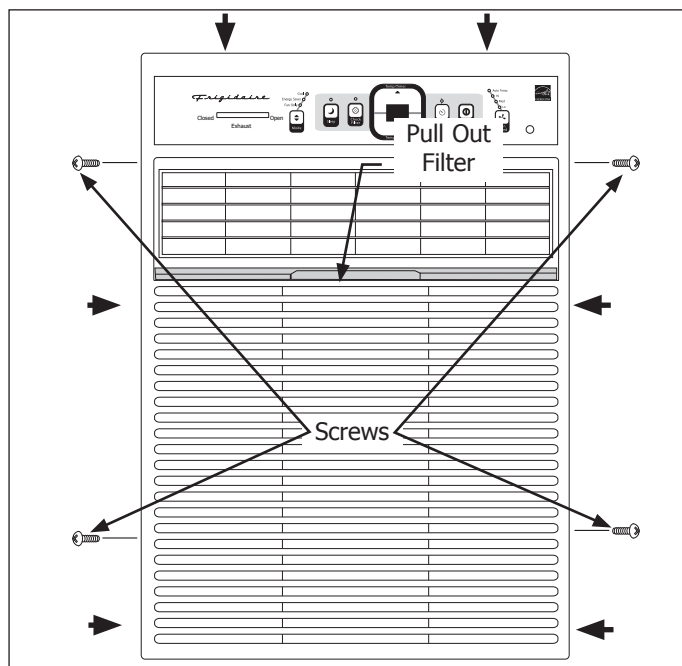


Figure 4-73.

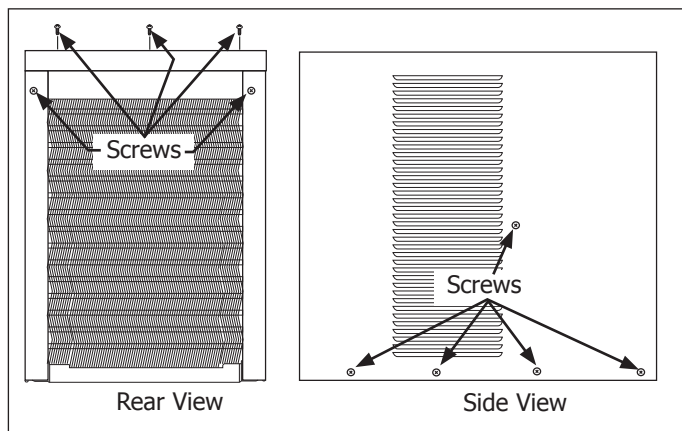


Figure 4-74.

#### Cabinet Wrapper/Sleeve Removal

To remove the cabinet wrapper/sleeve:

1. Disconnect the power supply from unit.
2. Remove the front panel assembly.
3. Extract the screws from each side of unit. Extract the screws securing the cabinet wrapper/sleeve to the back of the unit. (See Figure 4-74)
4. Lift the cabinet wrapper/sleeve off of the unit.

#### User Interface Removal

To remove the user interface:

1. Disconnect power supply from unit.
2. Remove the front panel assembly.
3. Extract the six screws securing user interface to front panel then lift user interface off front panel. (See Figure 4-75)

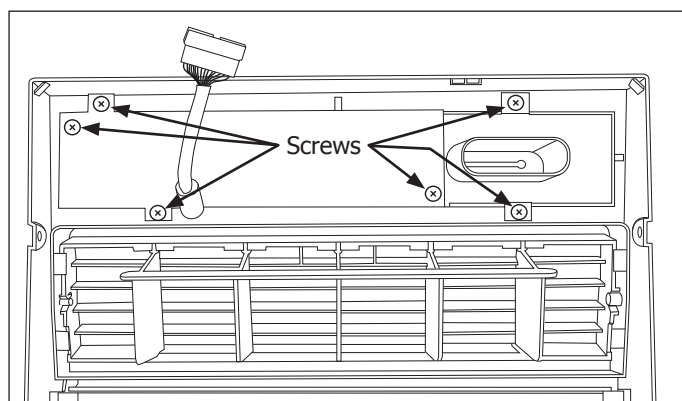


Figure 4-75.



## Section 4 Component Teardown

### Air Vent Lever and Door Removal

To remove the air vent lever and door:

1. Disconnect the power supply from unit.
2. Remove front panel and cabinet wrapper/sleeve.
3. Extract the two screws securing the air vent lever to the partition. (See Figure 4-76)
4. Release retainer latches and pull air vent lever from unit.
5. The air vent door is removed by releasing the retaining latches from the front of the partition and then pushing the air vent door through the partition until free from unit. (See Figure 4-76)

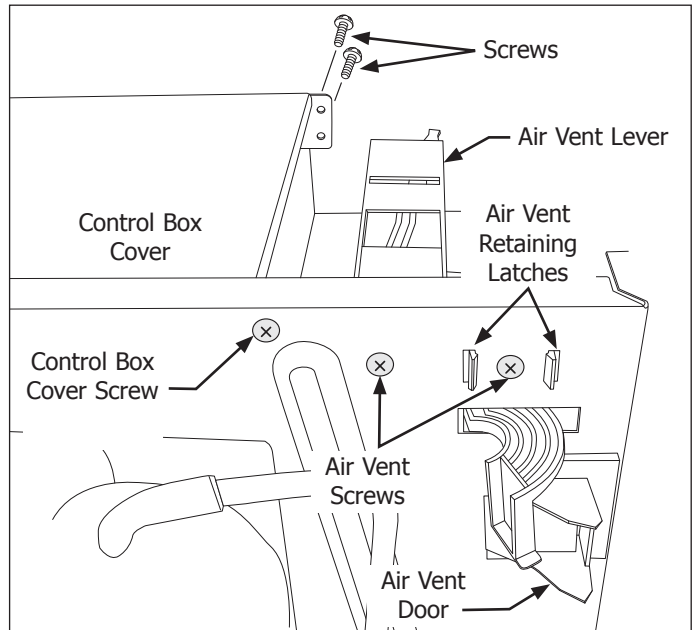


Figure 4-76.

### Control Box Cover Removal

1. Disconnect the power supply from unit.
2. Remove front panel and cabinet wrapper/sleeve.
3. Extract the two screws at the front of the unit securing the control box cover to the control box. (See Figure 4-76)
4. Extract the screw from the compressor side of the partition securing the control box cover in place. (See Figure 4-76)
5. Pull cover from control box.

### Control Box Component Removal

The control box houses the control board, capacitor and terminal block. The power cord enters the control box along the lower right side and is held in position with a grommet.

1. Disconnect the power supply from unit.
2. Remove front panel and cabinet wrapper/sleeve.
3. Discharge capacitor.

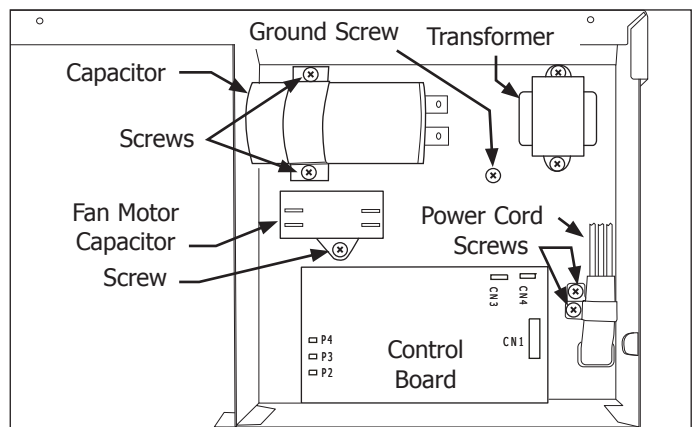


Figure 4-77.

### CAUTION

To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.

### To remove the capacitor:

4. Extract the screws securing the retaining band to bottom of control box. (See Figure 4-77)
5. Disconnect all wire leads from capacitor. Label as needed for proper reconnection.

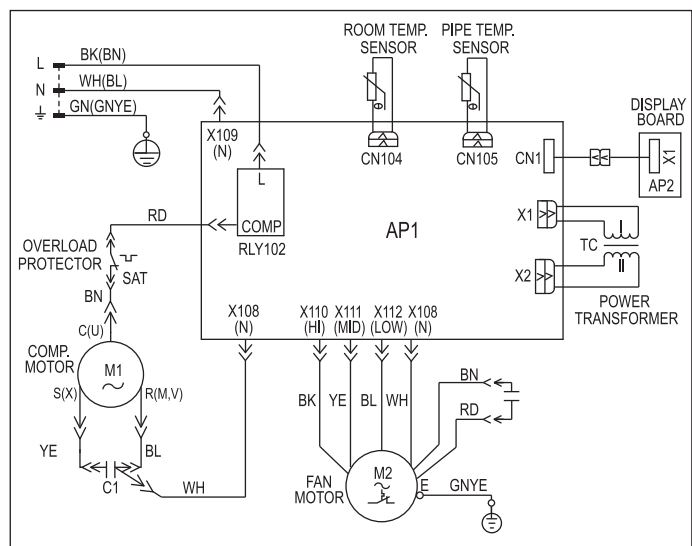


Figure 4-78.

## Section 4 Component Teardown

### To remove power cord:

6. Extract the two screws securing the power cord to the lower right front of the unit.
7. Cut all retaining straps holding the power cord to the evaporator.
8. Disconnect white and black wires from control board.
9. Extract ground screw securing green wire to bottom of control box.
10. Extract the two screws securing the power cord to the bottom of the control box. Pull power cord from unit. (See Figure 4-79)

### To remove fan motor capacitor:

11. Disconnect all wire leads from fan motor capacitor. Label as needed for proper reconnection.
12. Extract screw securing fan motor capacitor to bottom of control box. (See Figure 4-80)

### To remove transformer:

13. Disconnect all wire leads at the control board leading to the transformer. Label as needed for proper reconnection.
14. Extract the two screws securing transformer to bottom of control box. (See Figure 4-80)

### To remove the control board:

15. Disconnect all wire leads from control board. Label as needed for proper reconnection.
16. Compress the plastic retainers securing the control board to the bottom of the control box and remove from unit.

### To remove the thermistors:

17. Disconnect wire leads from control board. Thermistor connections at CN2 and CN3 may be glued to the control board. Carefully remove glue before attempting to remove the connectors. (See Figure 4-80)
18. Cut retaining straps securing thermistors to evaporator.
19. Remove thermistors from the front of the evaporator and from the tube attached to the evaporator. Pull wire leads out of control box.

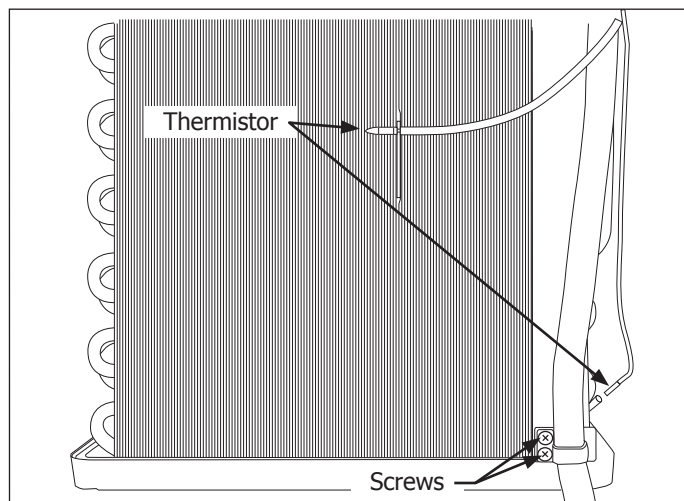


Figure 4-79.

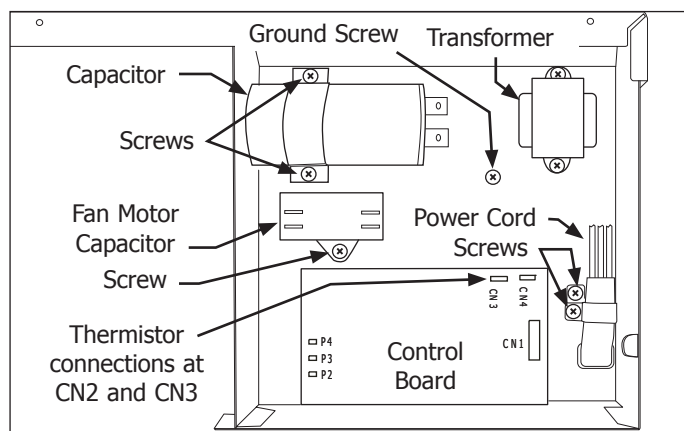


Figure 4-80.

### Control Box Removal

To remove the control box from the unit:

1. Disconnect the power supply from unit.
2. Remove front panel and cabinet wrapper/sleeve.
3. Remove control box cover. Discharge capacitor.
4. Disconnect wire leads from condenser fan motor and compressor. Remove wire leads from control box.
5. Extract screws securing power cord from front of unit.
6. Control box may now be removed with the power cord attached.

## Section 4 Component Teardown

### Accessing the Condenser Fan and Blower Assembly and Compressor

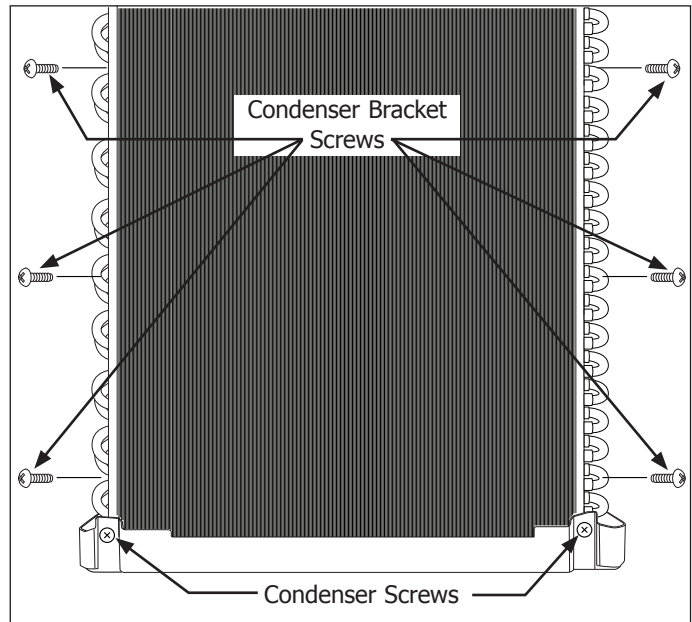
In order to access the condenser fan and blower assembly, the condenser and compressor must be removed from their installation positions. Care must be taken when moving the condenser so that the copper tubing is not kinked or ruptured.

1. Disconnect the power supply from unit.
2. Remove front panel and cabinet wrapper/sleeve.
3. Extract the two screws at the lower rear corners securing the condenser to the unit frame. (See Figure 4-81)
4. Extract the three screws from each side of the condenser securing the left and right side condenser bracket to the condenser. (See Figure 4-81)
5. Lift the condenser upwards to clear the base tray and rotate condenser slowly towards the right counter clockwise until screws for the condenser shroud are accessible.
6. Using a 16 mm socket or wrench, remove the nut securing condenser fan blade to condenser fan motor shaft. Remove lock washer and washer, then pull fan blade from motor shaft. (See Figure 4-82)
7. Extract the two screws securing the condenser shroud to the unit base. Remove shroud from unit.
8. To remove the condenser blower and fan motor, the entire sealed system must be removed as an assembly from the unit base. Begin by removing all wire harness tiedowns securing the condenser fan motor and compressor wire harness leads to the unit partition. Carefully position condenser back onto the unit base tray. Use care not to deform fins on condenser with the condenser motor shaft.
9. Use a 13 mm socket or wrench and remove the three nuts securing the compressor to the mounting bracket. (See Figure 4-83)
10. Remove the front scroll housing adapter from above the evaporator. Extract the two screws on each side of the evaporator securing the mounting bracket to the unit partition.

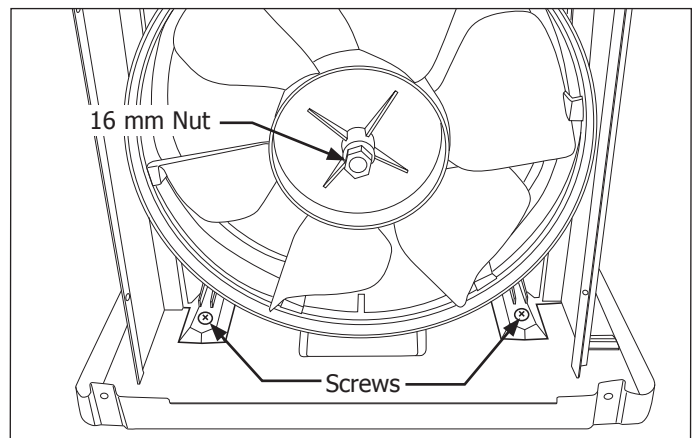
### CAUTION

It is recommended to have two people remove the sealed system from the unit base tray.

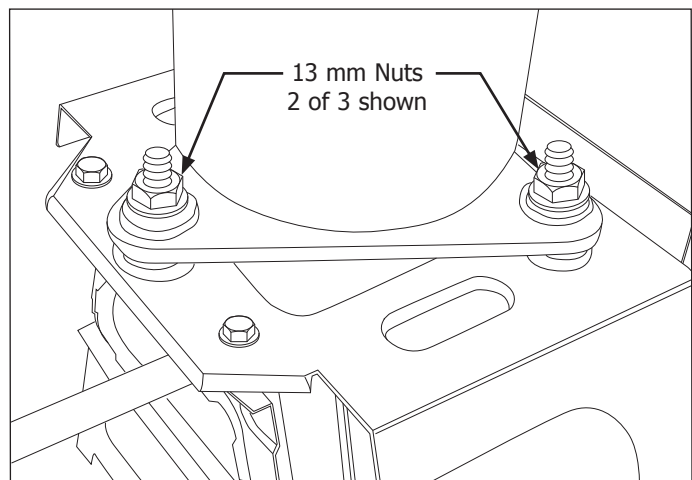
11. Lift the compressor off the mounting studs then carefully move the entire sealed system to the left until free of unit partition.



**Figure 4-81.**



**Figure 4-82.**



**Figure 4-83.**

## Section 4 Component Teardown

12. Remove the blower housing scroll from the front of the unit. Use a 13 mm socket or wrench to remove the left hand thread nut from the blower. Remove lock washer and washer, then pull blower from motor shaft.
13. Remove scroll housing back plate.
14. From the sides of the base tray remove the screw securing partition to base tray. (See Figure 4-84)
15. From both sides of partition, extract the screws securing the condenser fan motor mounting bracket to partition. Remove partition from base tray. (See Figure 4-85)
16. Extract screw securing ground screw to condenser mounting bracket. (See Figure 4-86)
17. Extract the four screws securing the condenser fan motor to rear of mounting bracket assembly. Pull condenser fan motor from unit base. (See Figure 4-86)

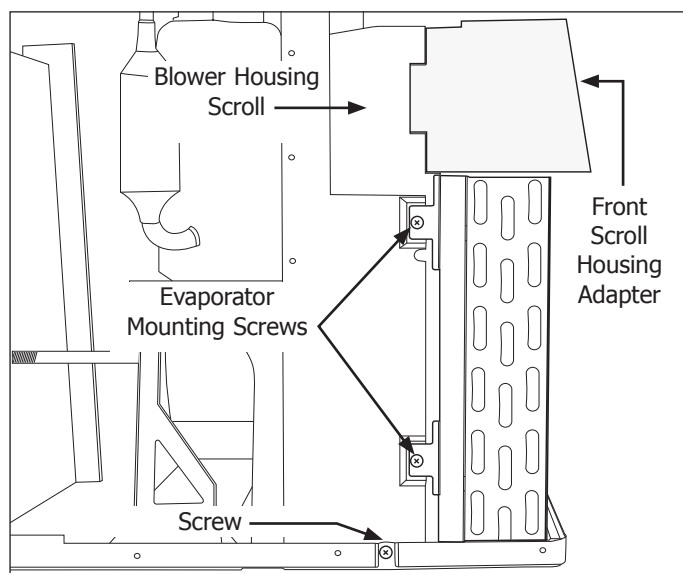


Figure 4-84.

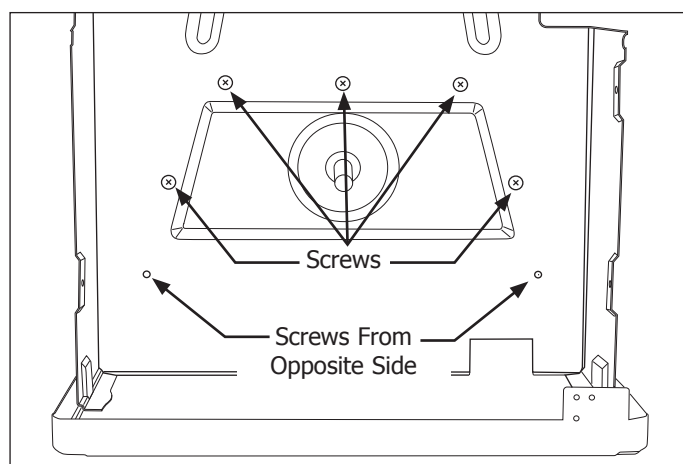


Figure 4-85.

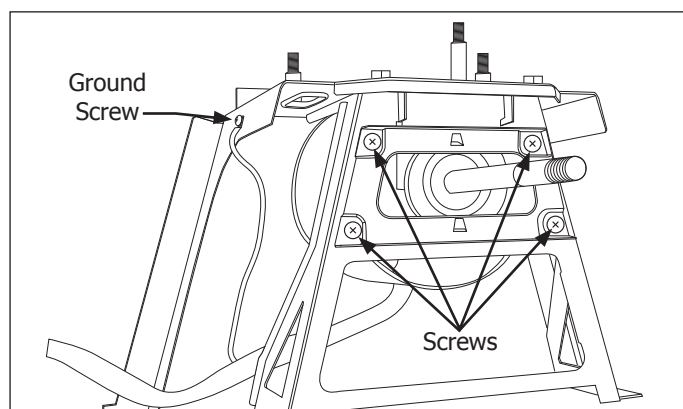


Figure 4-86.

### Removing Sealed System Components

#### Compressor Removal

To remove the compressor:

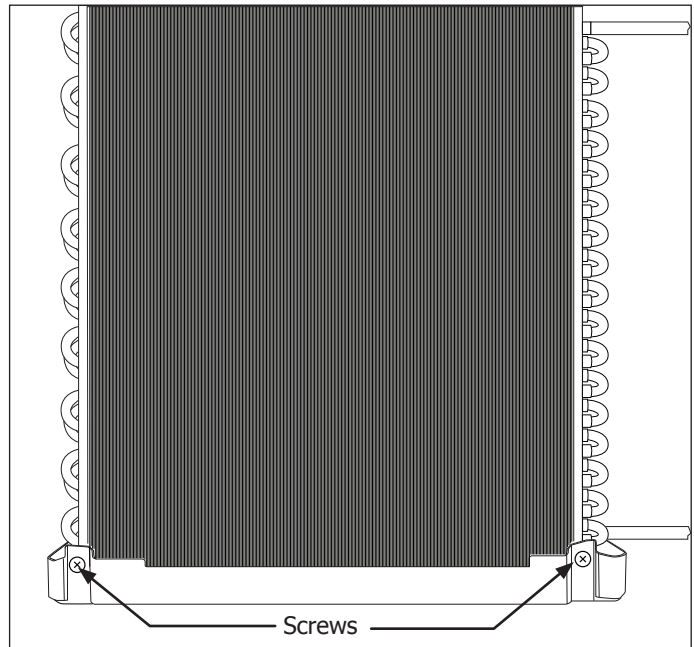
1. Disconnect power supply from unit.
2. Remove the front panel assembly. Pull the unit from the cabinet wrapper/sleeve.
3. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
4. Disconnect the compressor inlet line above the accumulator. Disconnect discharge line one inch from the outlet.
5. Use a 13 mm socket or wrench and remove the 3 nuts securing the compressor to the unit base. (See Figure 4-83)
6. Remove the compressor electrical components by using an 8 mm socket or wrench and remove the nut securing the cover to the top of the compressor.

## Section 4 Component Teardown

### Condenser Removal

To remove the condenser:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve.
3. Extract the three screws from each side of the condenser securing the left and right side condenser bracket to the condenser. (See Figure 4-81)
4. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
5. Disconnect inlet and outlet lines from condenser.
6. Extract the two screws securing the bottom of the condenser to the unit base. (See Figure 4-87)
7. Carefully lift the condenser out from the unit base.

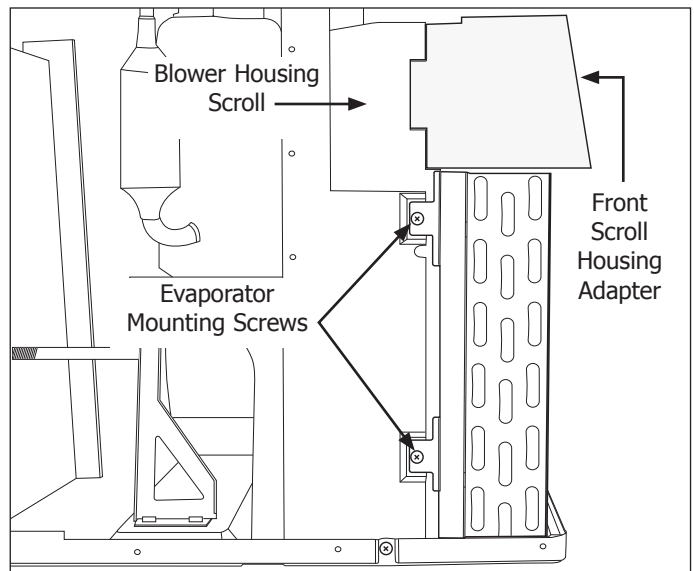


**Figure 4-87.**

### Evaporator Removal

To remove the evaporator:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve.
3. Remove the control box assembly with power cord and thermistors.
4. Remove the front scroll housing adapter from above the evaporator. Extract the two screws on each side of the evaporator securing the mounting bracket to the unit partition. (See Figure 4-88)
5. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
6. Disconnect inlet and outlet lines from evaporator.
7. Carefully lift the evaporator out from the unit base.



**Figure 4-88.**

### Model FAC (Compact) Series

#### Filter And Front Panel Assembly Removal

1. Disconnect the power supply from unit.
2. Push the vent handle back into the air passageway until free of the front panel assembly.
3. Open the front grille panel by using both hands, grabbing along the sides of the unit and pulling the top of the front grille panel away from the unit until the retaining tabs release from the front panel. Tilt the front grille panel away from the unit.
4. Grasp the filter in the center and pull out of unit.
5. Pull the front grille panel out from the slots at the bottom corners of the unit frame.
6. Extract the four screws securing the front panel to the unit frame. (See Figure 4-89)
7. Remove the front panel by pulling the outer edges away from the unit frame until the tabs are free of the slots in the unit frame. (See Figure 4-90 Arrows show the tab locations) Release the two side tabs first then lift the front panel upwards until the front panel is free.



#### CAUTION

Use caution not to strain wire harness connections. The user interface and ambient thermistor are still connected to the wiring harness and can only be disconnected at the inner control board.

8. Turn front panel to access the ionizer cable, using caution not to strain the wire harness connections. Remove ionizer cable from the retainers on the back side of the front panel. (See Figure 4-91)

#### User Interface Removal

The user interface can be removed from the front panel by extracting the 3 screws as shown in Figure 4-92, however, the user interface wiring harness will still be connected to the control panel. Accessing the control panel will be covered on page 4-36.

To remove the user interface:

1. Disconnect power supply from unit.
2. Follow the steps above for front panel removal.
3. Extract the three screws, then rotate user interface and push through front panel. Front panel is now free.



#### NOTE

Due to the number of models within the series, some teardown procedures, such as locations and number of fasteners, and location of electrical system components, may vary from the descriptions given in this section.

Always use the wiring diagram attached to the unit for all electrical connections.

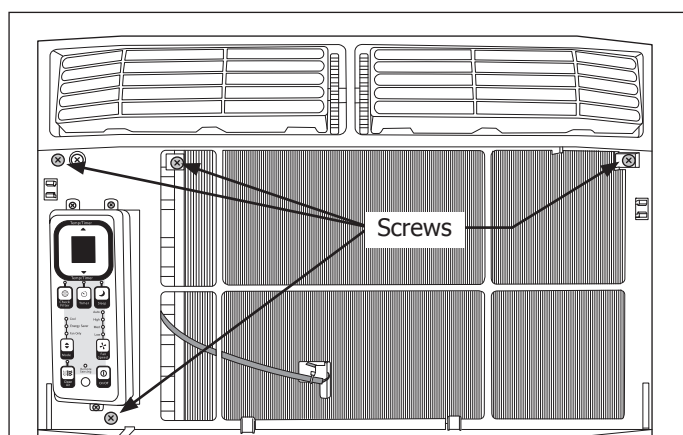


Figure 4-89.

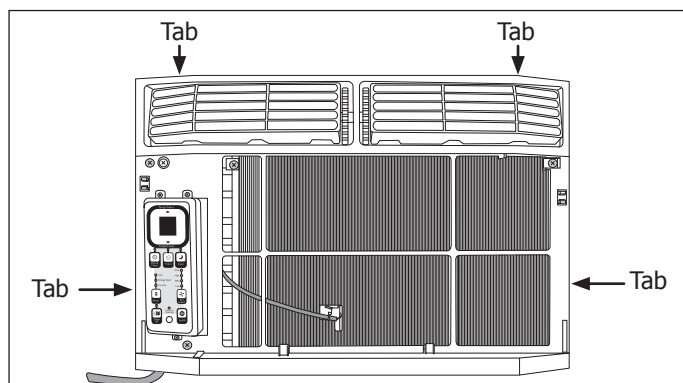


Figure 4-90.

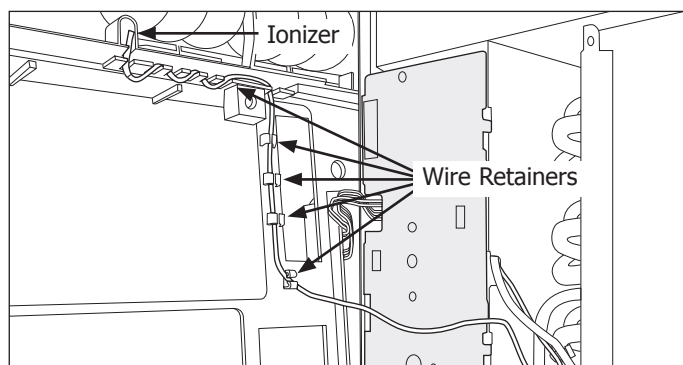


Figure 4-91.



## Section 4 Component Teardown

### Cabinet Wrapper/Sleeve Removal

The cabinet wrapper/ sleeve is secured to the unit frame with 10 screws, 4 screws along the lower right side, 4 screws on the lower left side and 2 screws that must be extracted from the top rear corners of the unit.

To remove the cabinet wrapper/ sleeve:

1. Disconnect power supply from unit.
2. Remove front panel. The user interface does not have to be removed from the front panel.
3. Extract the screws from the cabinet wrapper/sleeve, then pull the left and right bottom edges away from the unit frame and lift the cabinet wrapper/sleeve off the unit. (See Figure 4-93)

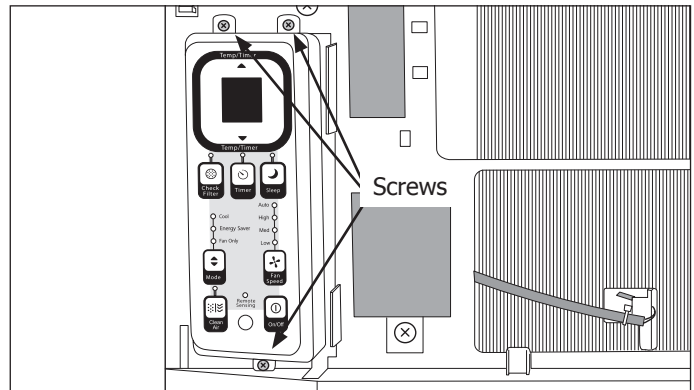


Figure 4-92.

### Control Panel Removal

The control panel is secured to the unit frame with two retaining tabs that slide into slots along the right side of the mounting bracket and a screw at the top and bottom of the control panel mounting bracket.

To remove the control panel:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve.
3. Extract the screws from front of control panel assembly. (See Figure 4-94)
4. Lift the control panel assembly upwards to release the retaining tabs.
5. Pull control panel assembly away from unit frame to access the wire leads connected to control board.
6. Discharge capacitor.

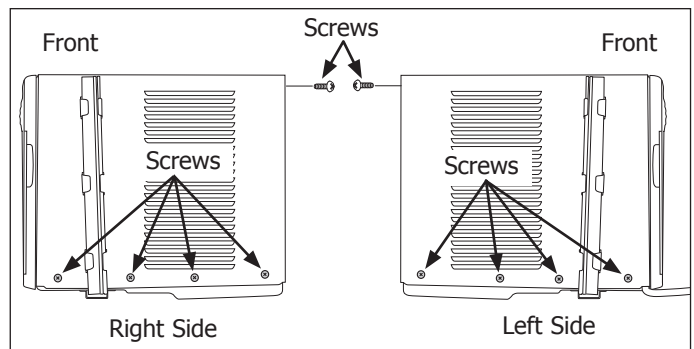


Figure 4-93.

### CAUTION

To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.

7. The wire harness connector for the user interface is glued to the control board connector. Carefully remove glue with a sharp knife before attempting to disconnect connector from control board.
8. Disconnect all wire leads connected to control panel. Label wire leads as needed to identify and for the reconnecting of wire leads.
9. Use a small pliers to compress the plastic retainers securing the control board and remove from the mounting bracket.

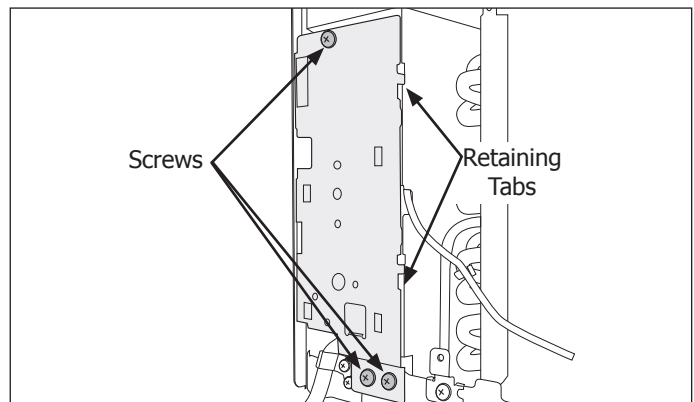


Figure 4-94.



## Section 4 Component Teardown

### Power Cord, Capacitor and Anion Generator Removal

The power cord is secured to the unit frame with two P-clamps and screws. The capacitor and anion generator are secured with a single screw.

#### To remove the power cord:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve. Remove the control panel from its installation position but do not disconnect from wire harness.
3. Discharge capacitor.

#### **CAUTION**

To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.

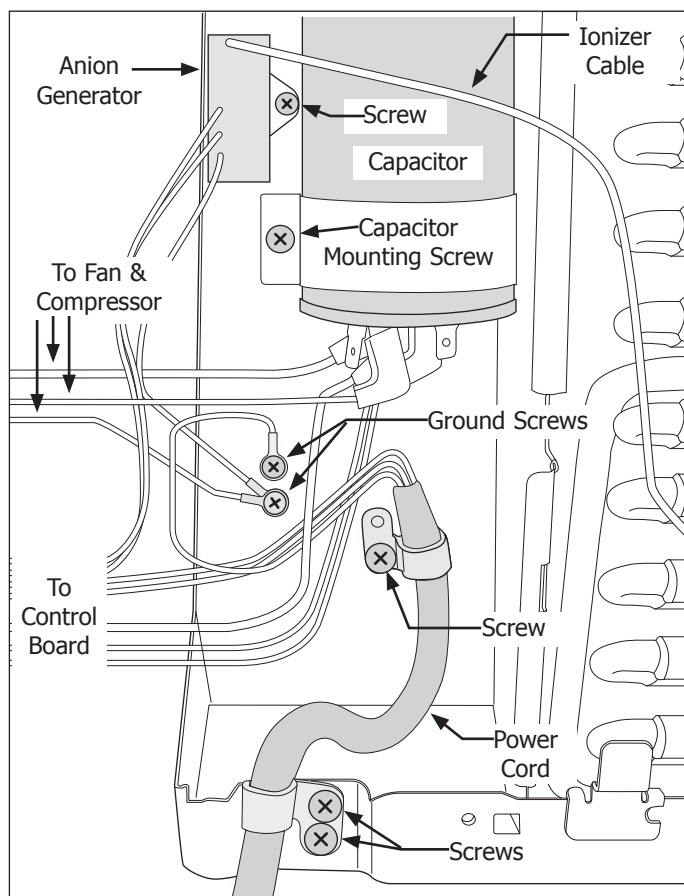
4. Extract the two screws securing the power cord P-clamp at the base of the unit. (See Figure 4-95)
5. Extract the screw securing the P-clamp inside the compartment. (See Figure 4-95)
6. Extract the top ground screw and remove the ground wire lead for the power cord. (See Figure 4-95)
7. Disconnect the black and white wire leads of the power cord from the control board. Power cord is now free.

#### To remove the capacitor:

4. Follow steps 1-3 above.
5. Disconnect the wire leads from the capacitor.
6. Extract the capacitor mounting screw. Remove the mounting strap and the capacitor is free. (See Figure 4-95)

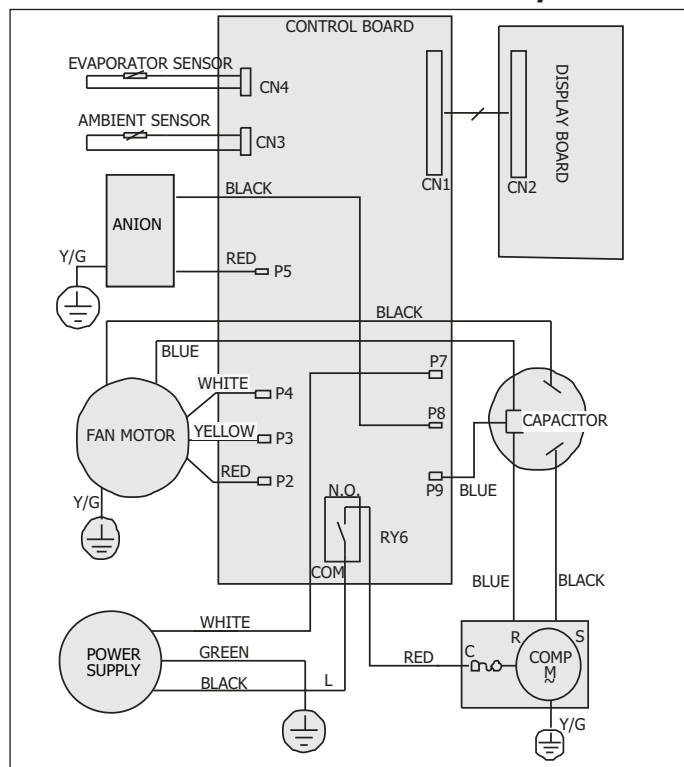
#### To remove the anion generator:

4. Follow steps 1-3 above.
5. Cut or remove straps securing the ionizer cable to the unit.
6. Extract the bottom ground screw and remove the ground wire lead for the anion generator. (See Figure 4-95)
7. Disconnect the black and white wire leads from the control board that go to the anion generator.
8. Extract the anion generator mounting screw. Anion generator is now free. (See Figure 4-95)



**Figure 4-95.**

**Not all wires shown for clarity.**



**Figure 4-96.**

## Section 4 Component Teardown

### Evaporator Thermistor Removal

To remove the evaporator thermistor:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve. Remove the control panel from its installation position but do not disconnect from wire harness.
3. Disconnect thermistor from control board.
4. Remove or cut any retaining straps. Remove thermistor from retaining bracket. The retaining bracket is pushed onto the evaporator tubing, remove by pulling bracket out of evaporator. (See Figure 4-97)

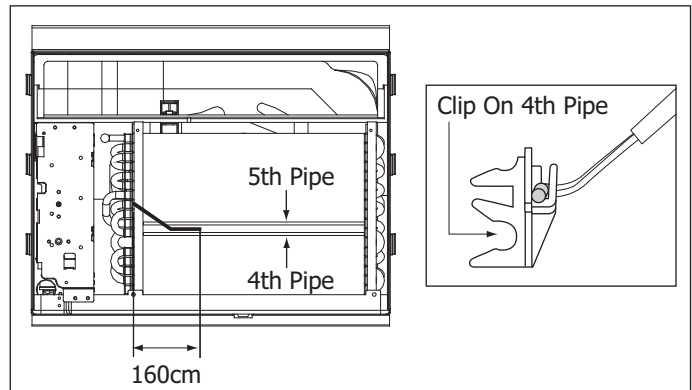


Figure 4-97.

### Control System Bulkhead

The control system bulkhead provides a mounting area for the electronic control and electrical system components. Three screws secure the bulkhead to the unit frame. Two of the screws will be removed as the cabinet wrapper/sleeve and user interface are removed.

To remove the control system bulkhead:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve. Remove control panel from its installation position.
3. Discharge capacitor. To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with an insulated screwdriver.
4. Disconnect all electrical leads from control board, capacitor, power cord and anion generator. Remove ground wires from bulkhead.
5. Pull wire harness through hole in bulkhead.
6. Extract screw from lower left side of unit frame. Pull bulkhead from the unit. (See Figure 4-98)

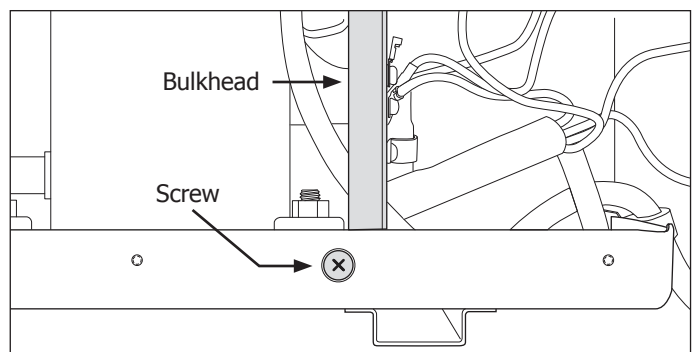


Figure 4-98.

### Styrofoam Blower Compartment Removal

The styrofoam blower compartment consists of three parts, with the top two pieces removable to access the blower wheel. The top two pieces are taped together and may be removed as an assembly.

To remove the styrofoam blower compartment:

1. Remove the front panel and cabinet wrapper/sleeve.
2. Cut the tape holding the top two styrofoam pieces to the bottom section of styrofoam.
3. Lift the top two sections out as an assembly and remove from the unit. (See Figure 4-99)

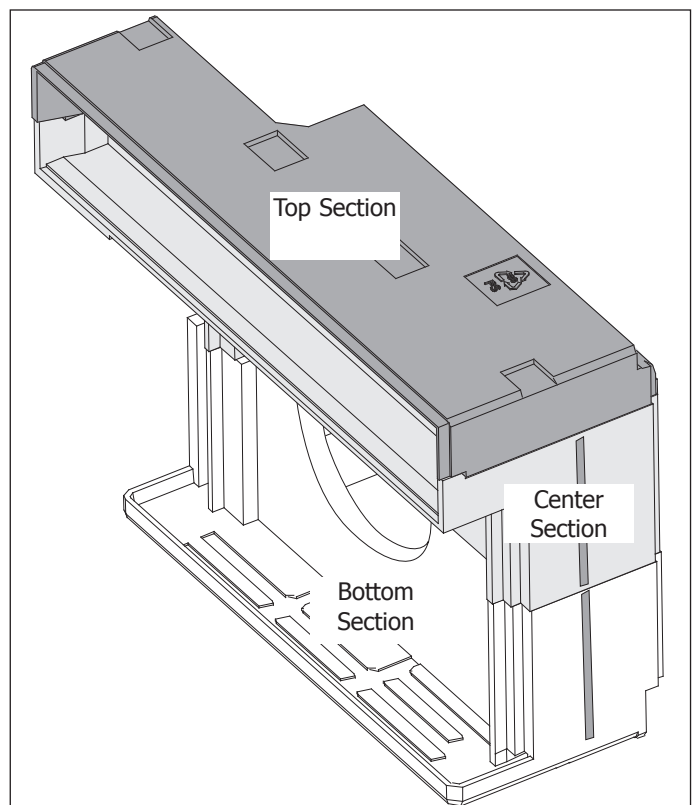


Figure 4-99.

## Section 4 Component Teardown

### Fan and Blower Assembly Removal

To remove the fan and blower assembly:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve. Remove the control panel from its installation position but do not disconnect from wire harness. Remove the top two styrofoam sections of the blower compartment.
3. Discharge capacitor. To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.
4. The fan motor wire harness passes through the control system bulkhead. Disconnect the fan motor wire leads from the capacitor and control board. Remove ground wire from control system bulkhead.
5. Pull fan motor wire harness through hole in control system bulkhead.
6. Extract the 3 screws from each side of condenser, then extract the two screws from the top of the condenser. (See Figure 4-100)
7. Extract the two screws securing the bottom of the fan and blower assembly to the unit base. (See Figure 4-100)
8. Use either a 10 mm extended socket of a long phillips head screwdriver and extract the four screws securing the fan motor mounting bracket to the unit base. (See Figure 4-100)
9. Carefully lift the fan and blower assembly upwards until free of condenser.

### Assembly Breakdown

10. Use an 16mm socket or wrench and remove the nut securing the blower to the fan motor shaft. Remove the lock washer and washer from shaft. Pull blower from motor shaft. (See Figure 4-101)
11. Use a 13mm socket or wrench and remove the left hand nut and lock washer securing the fan blade to the fan motor shaft. Pull the fan blade from the motor shaft. (See Figure 4-102)
12. Use a phillips head screwdriver or an 8 mm wrench or socket and extract the 3 screws securing the fan motor to the mounting bracket. The fan motor is now free. (See Figure 4-103)

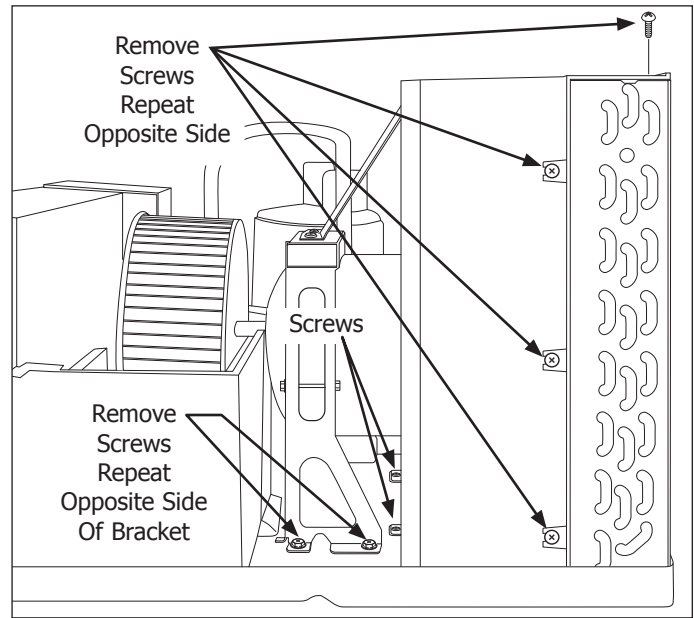


Figure 4-100.

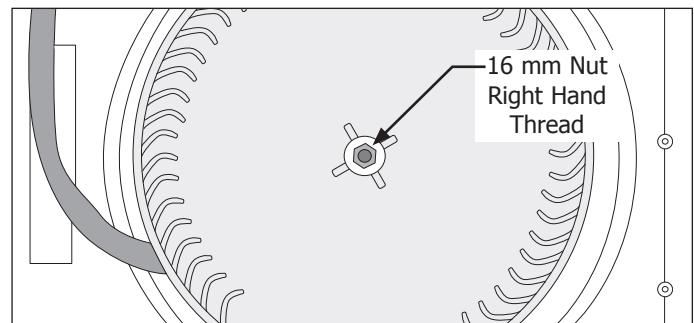


Figure 4-101.

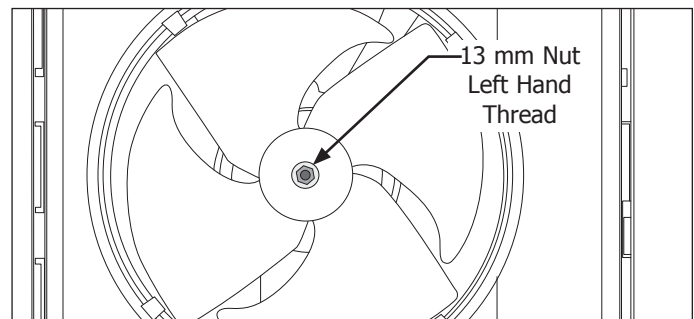


Figure 4-102.

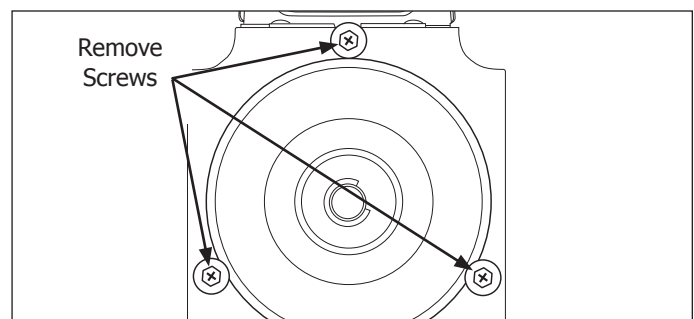


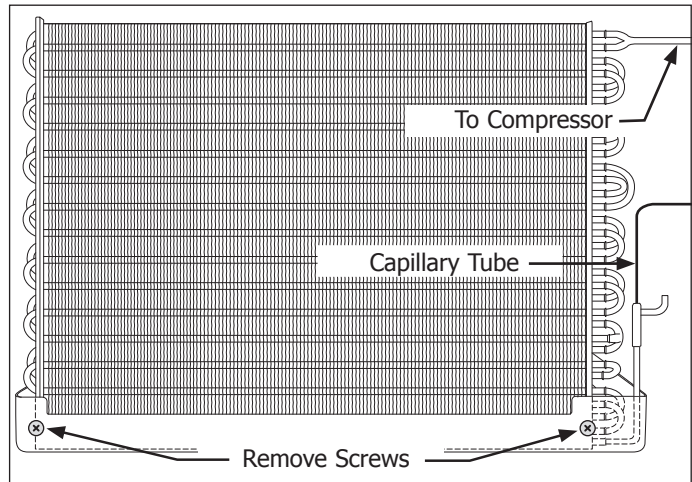
Figure 4-103.

## Section 4 Component Teardown

### Condenser Removal

To remove the condenser:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve.
3. Discharge capacitor. To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.
4. Remove the fan and blower assembly.
5. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
6. Disconnect inlet and outlet lines from condenser.
7. Using a 3 cornered file, score a groove around capillary tube as shown. Break capillary tube along score mark.
8. Extract the two screws securing the bottom of the condenser to the unit base. (See Figure 4-104)
9. Carefully lift the condenser out from the unit base.

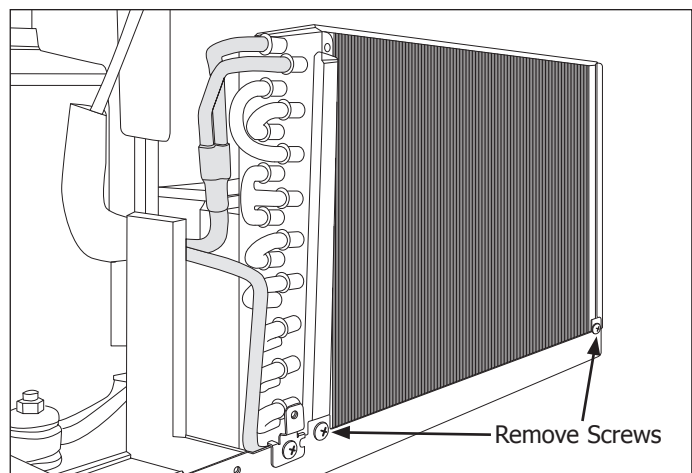


**Figure 4-104.**

### Evaporator Removal

To remove the evaporator:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve.
3. Discharge capacitor. To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.
4. Remove the fan and blower assembly.
5. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
6. Disconnect inlet and outlet lines from evaporator.
7. Extract the two screws securing the bottom front of the evaporator to the unit base. (See Figure 4-105)
8. Carefully lift the evaporator out from the unit base.

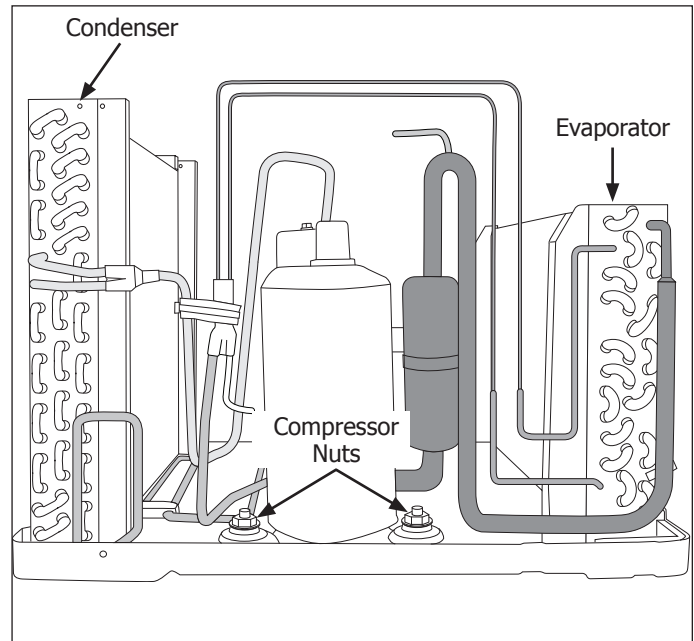


**Figure 4-105.**

### Compressor Removal

To remove the capillary tube assembly:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve.
3. Discharge capacitor. To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.
4. Disconnect compressor electrical leads from control board and capacitor. Feed wire leads through access hole in control panel bulkhead into compressor area.
5. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
6. Disconnect the compressor inlet line above the accumulator. Disconnect discharge line one inch from the outlet.
7. Use a 13mm socket or wrench and remove the 3 nuts securing the compressor to the unit base. (See Figure 4-106)
8. Remove the compressor electrical components by using an 8mm socket or wrench and remove the nut securing the cover to the top of the compressor.



**Figure 4-106.**



## Section 4 Component Teardown

### Model FAA (Mini-Compact) Series

#### Filter And Front Panel Assembly Removal

1. Disconnect the power supply from unit.
2. Push the vent handle to the vent closed position (where applicable).
3. Open the front grille panel by using both hands, grabbing along the sides of the unit and pulling the top of the front grille panel away from the unit until the retaining tabs release from the front panel. Tilt the front grille panel away from the unit.
4. Grasp the filter in the center and pull out of unit.
5. Pull the front grille panel out from the slots at the bottom corners of the unit frame.
6. Extract the four screws securing the front panel to the unit frame. (See Figure 4-107)
7. Remove the front panel by pulling the outer edges away from the unit frame until the tabs are free of the slots in the unit frame. (See Figure 4-108 Arrows show the tab locations) Release the two side tabs first then lift the front panel upwards until the front panel is free.



#### CAUTION

Use caution not to strain wire harness connections. The user interface and ambient thermistor are still connected to the wiring harness and can only be disconnected at the inner control board.

8. Turn front panel to access the ionizer cable, using caution not to strain the wire harness connections. Remove ionizer cable from the retainers on the back side of the front panel. (See Figure 4-109)

#### User Interface Removal

The user interface can be removed from the front panel by extracting the 3 screws as shown in Figure 4-110, however, the user interface wiring harness will still be connected to the control panel. Accessing the control panel will be covered on page 4-43.

To remove the user interface:

1. Disconnect power supply from unit.
2. Follow the steps above for front panel removal.
3. Extract the three screws, then turn the user interface and push through front panel. Front panel is now free. (See Figure 4-110)



#### NOTE

Due to the number of models within the series, some teardown procedures, such as locations and number of fasteners, and location of electrical system components, may vary from the descriptions given in this section.

Always use the wiring diagram attached to the unit for all electrical connections.

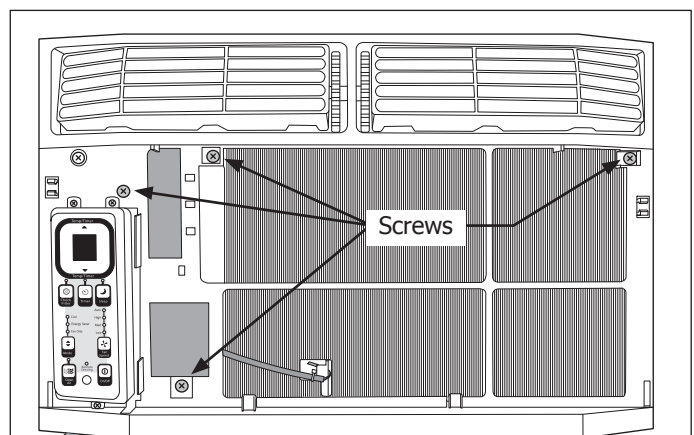


Figure 4-107.

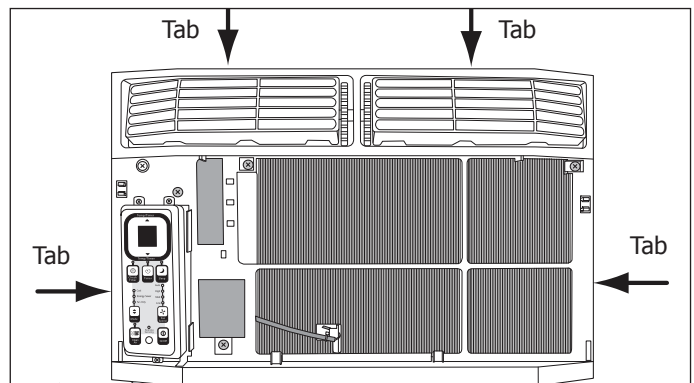


Figure 4-108.

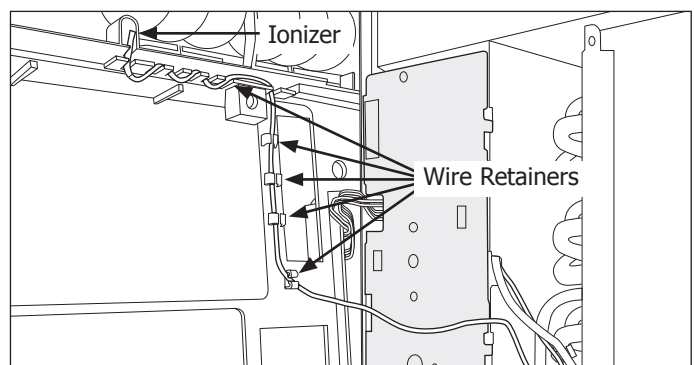


Figure 4-109.

## Section 4 Component Teardown

### Cabinet Wrapper/Sleeve Removal

The cabinet wrapper/ sleeve is secured to the unit frame with 3 screws along the lower right side, 4 screws on the left side and 2 screws that must be extracted from the top of the unit.

To remove the cabinet wrapper/ sleeve:

1. Disconnect power supply from unit.
2. Remove front panel. The user interface does not have to be removed from the front panel.
3. Extract the screws from the cabinet wrapper/sleeve, then pull the left and right bottom edges away from the unit frame and lift the cabinet wrapper/sleeve off the unit. (See Figure 4-111)

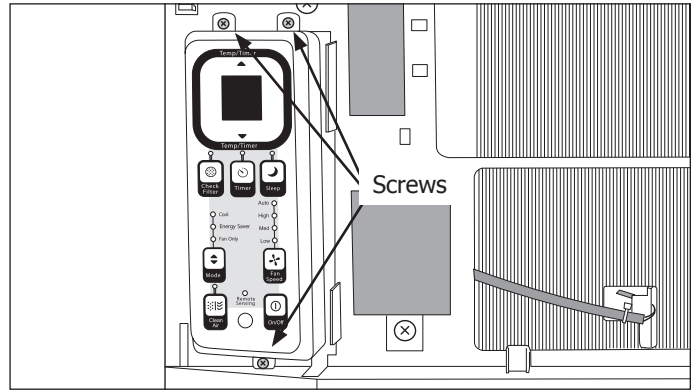


Figure 4-110.

### Control Panel Removal

The control panel is secured to the unit frame with two retaining tabs that slide into slots along the right side of the mounting bracket and a screw at the top and bottom of the control panel mounting bracket.

To remove the cabinet wrapper/ sleeve:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve.
3. Extract the screws from front of control panel mounting bracket. (See Figure 4-112)
4. Lift the control panel assembly upwards to release the retaining tabs then pull the control panel assembly away from the unit frame to access the wire leads connected to the control board.
5. Discharge capacitor.

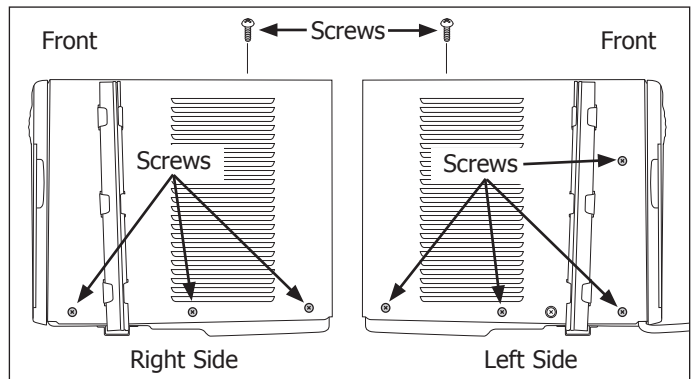


Figure 4-111.

### CAUTION

To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.

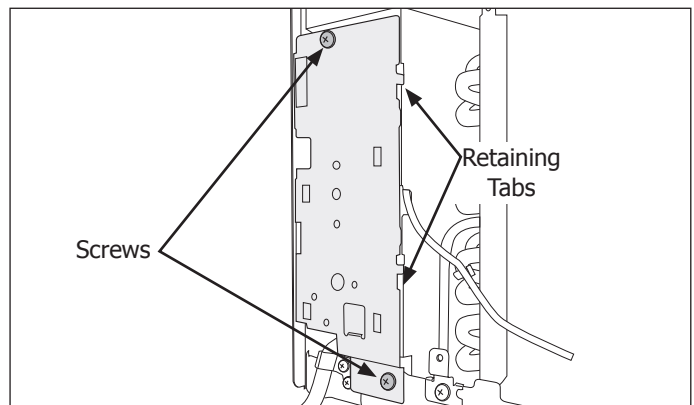


Figure 4-112.

6. The wire harness connector for the user interface is glued to the control board connector. Carefully remove glue with a sharp knife before attempting to disconnect connector from control board.
7. Disconnect all wire leads connected to control panel. Label wire leads as needed to identify and for the reconnecting of wire leads.
8. Use a small pliers to compress the plastic retainers securing the control board and remove from the mounting bracket.



## Section 4 Component Teardown

### Power Cord, Capacitor and Anion Generator Removal

The power cord is secured to the unit frame with two P-clamps and screws. The capacitor and anion generator are secured with a single screw.

#### To remove the power cord:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve. Remove the control panel from its installation position but do not disconnect from wire harness.
3. Discharge capacitor.

#### **CAUTION**

To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.

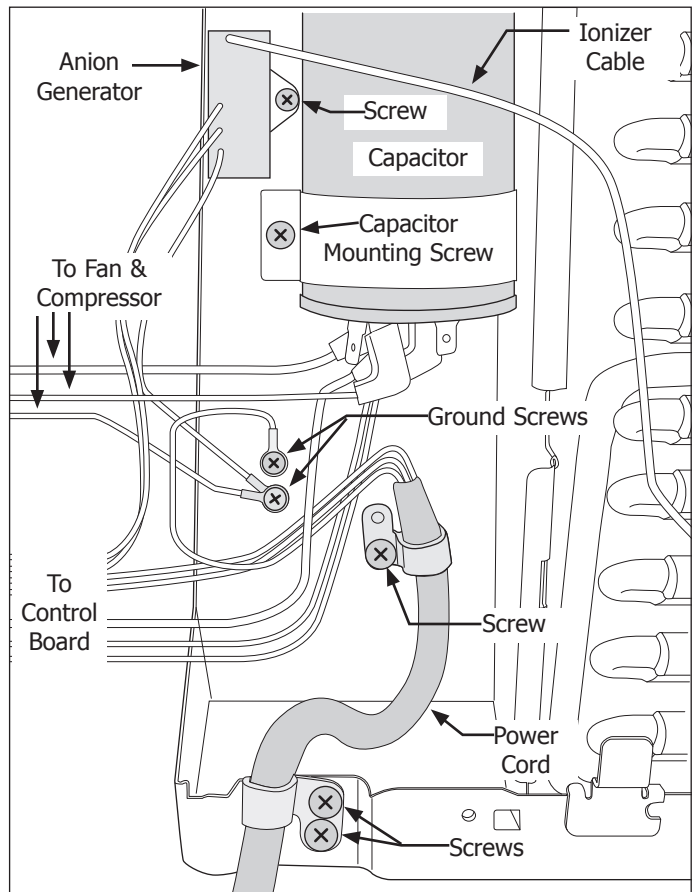
4. Extract the two screws securing the power cord P-clamp at the base of the unit. (See Figure 4-113)
5. Extract the screw securing the P-clamp inside the compartment. (See Figure 4-113)
6. Extract the top ground screw and remove the ground wire lead for the power cord.
7. Disconnect the black and white wire leads of the power cord from the control board. Power cord is now free.

#### To remove the capacitor:

4. Follow steps 1-3 above.
5. Disconnect the wire leads from the capacitor.
6. Extract the capacitor mounting screw. Remove the mounting strap and the capacitor is free. (See Figure 4-113)

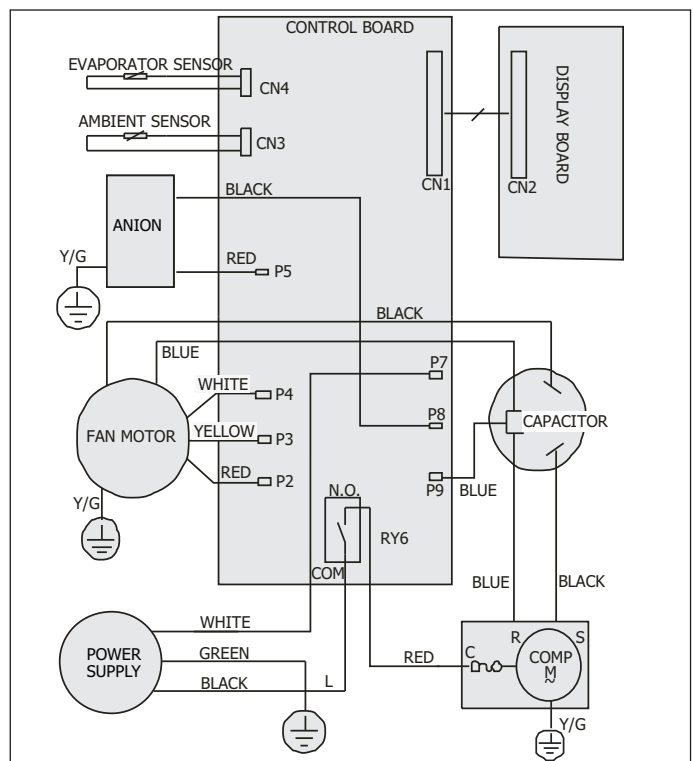
#### To remove the anion generator:

4. Follow steps 1-3 above.
5. Cut or remove straps securing the ionizer cable to the unit.
6. Extract the bottom ground screw and remove the ground wire lead for the anion generator.
7. Disconnect the black and white wire leads from the control board that go to the anion generator.
8. Extract the anion generator mounting screw. Anion generator is now free. (See Figure 4-113)



**Figure 4-113.**

**Not all wires shown for clarity.**



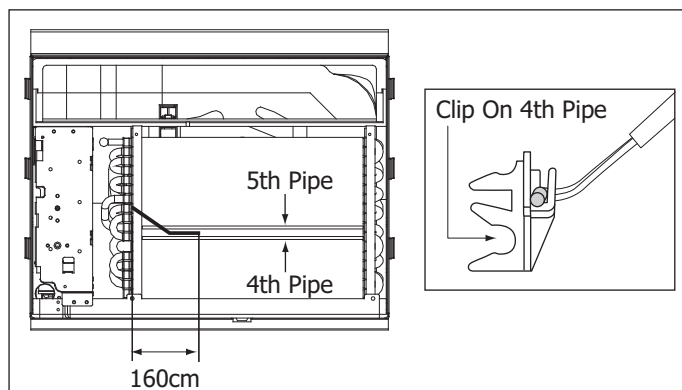
**Figure 4-114.**

## Section 4 Component Teardown

### Evaporator Thermistor Removal

To remove the evaporator thermistor:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve. Remove the control panel from its installation position but do not disconnect from wire harness.
3. Disconnect thermistor from control board.
4. Remove or cut any retaining straps. Remove thermistor from retaining bracket. The retaining bracket is pushed onto the evaporator tubing, remove by pulling bracket out of evaporator. (See Figure 4-115)



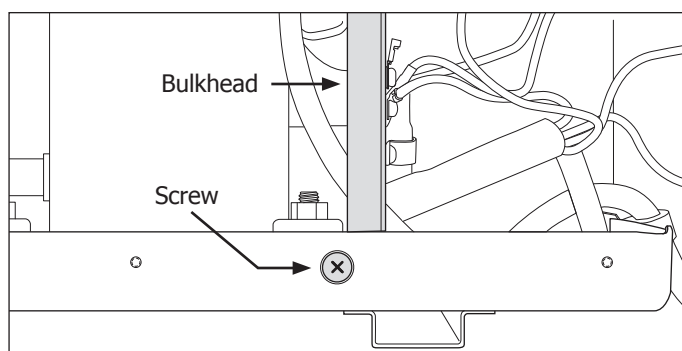
**Figure 4-115.**

### Control System Bulkhead Removal

The control system bulkhead provides a mounting area for the electronic control and electrical system components. Three screws secure the bulkhead to the unit frame. Two of the screws will be removed as the cabinet wrapper/sleeve and user interface are removed.

To remove the control system bulkhead:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve. Remove control panel from its installation position.
3. Discharge capacitor. To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with an insulated screwdriver.
4. Disconnect all electrical leads from control board, capacitor, power cord and anion generator. Remove ground wires from bulkhead.
5. Pull wire harness through hole in bulkhead.
6. Extract screw from lower left side of unit frame. Pull bulkhead from the unit. (See Figure 4-116)



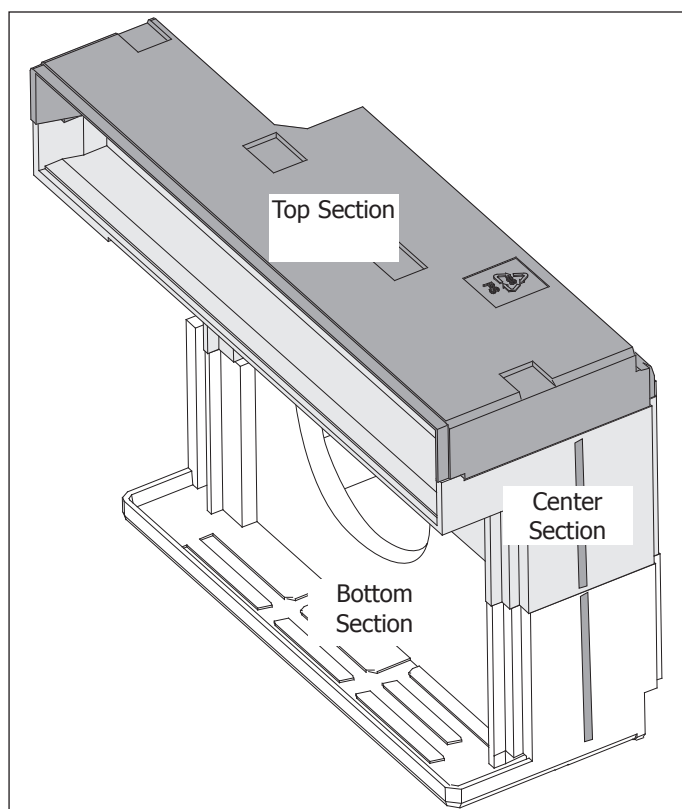
**Figure 4-116.**

### Styrofoam Blower Compartment Removal

The styrofoam blower compartment consists of three parts, with the top two pieces removable to access the blower wheel. The top two pieces are taped together and may be removed as an assembly.

To remove the styrofoam blower compartment:

1. Remove the front panel and cabinet wrapper/sleeve.
2. Cut the tape holding the top two styrofoam pieces to the bottom section of styrofoam.
3. Lift the top two sections out as an assembly and remove from the unit. (See Figure 4-117)



**Figure 4-117.**

## Section 4 Component Teardown

### Fan and Blower Assembly Removal

The fan and blower assembly is removed as an assembly. Two screws secure the assembly to the unit base. Three screws along the each side of the condenser fasten into a metal bar that slides into the fan and blower assembly.

To remove the fan and blower assembly:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve. Remove the control panel from its installation position but do not disconnect from wire harness. Remove the top two styrofoam sections of the blower compartment.
3. Discharge capacitor. To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.
4. The fan motor wire harness passes through the control system bulkhead. Disconnect the fan motor wire leads from the capacitor and control board. Remove ground wire from control system bulkhead.
5. Pull fan motor wire harness through hole in control system bulkhead.
6. Extract the 3 screws from each side of condenser. (See Figure 4-118)
7. Extract the two screws securing the bottom of the fan and blower assembly to the unit base. (See Figure 4-118)
8. Carefully lift the fan and blower assembly upwards until free of condenser. The metal side brackets may fall out of the fan and blower assembly as it is lifted of the unit base.

### Assembly Breakdown

9. Use an 8mm socket or wrench and remove the nut securing the blower to the fan motor shaft. Remove the lock washer and washer from shaft. Pull blower from motor shaft. (See Figure 4-119)
10. Use a 10mm socket or wrench and remove the left hand nut and lock washer securing the fan blade to the fan motor shaft. Pull the fan blade from the motor shaft. (See Figure 4-120)
11. Extract the 3 Phillips head screws securing the fan motor to the mounting bracket. The fan motor is now free. (See Figure 4-121)

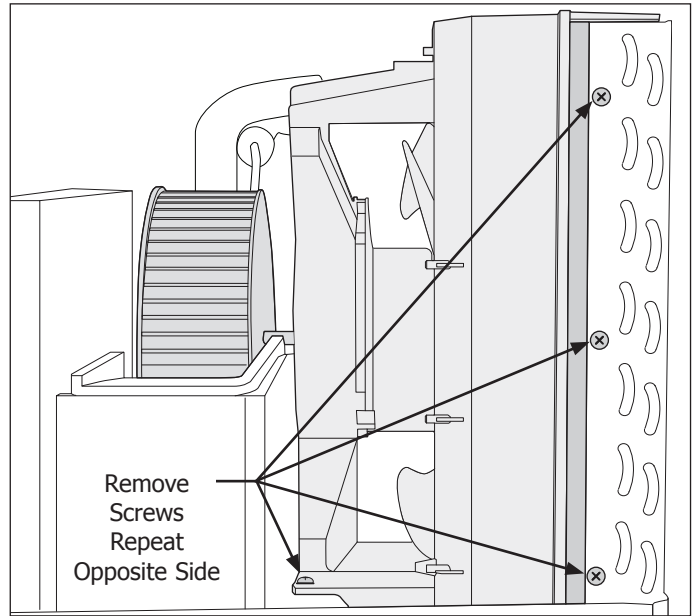


Figure 4-118.

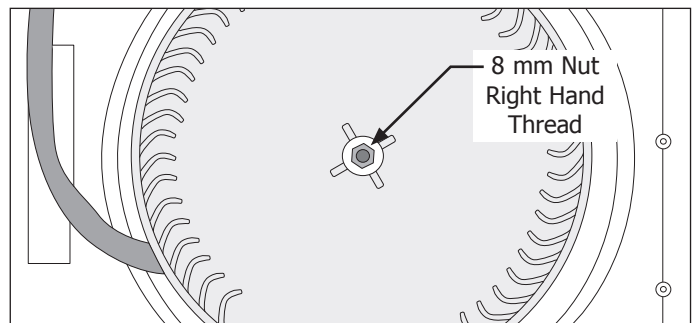


Figure 4-119.

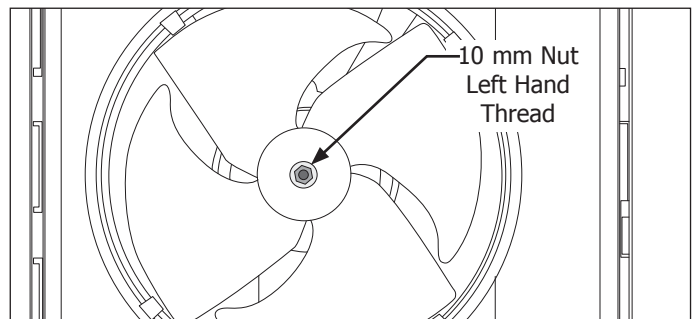


Figure 4-120.

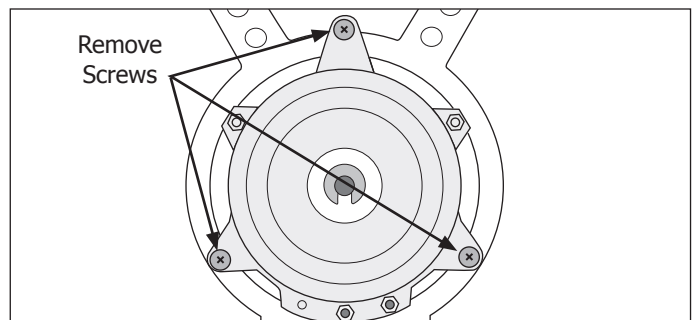


Figure 4-121.

## Section 4 Component Teardown

### Condenser Removal

To remove the condenser:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve.
3. Discharge capacitor. To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.
4. Remove the fan and blower assembly.
5. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
6. Disconnect inlet and outlet lines from condenser.
7. Using a 3 cornered file, score a groove around capillary tube as shown. Break capillary tube along score mark.
8. Extract the two screws securing the bottom of the condenser to the unit base. (See Figure 4-122)
9. Carefully lift the condenser out from the unit base.

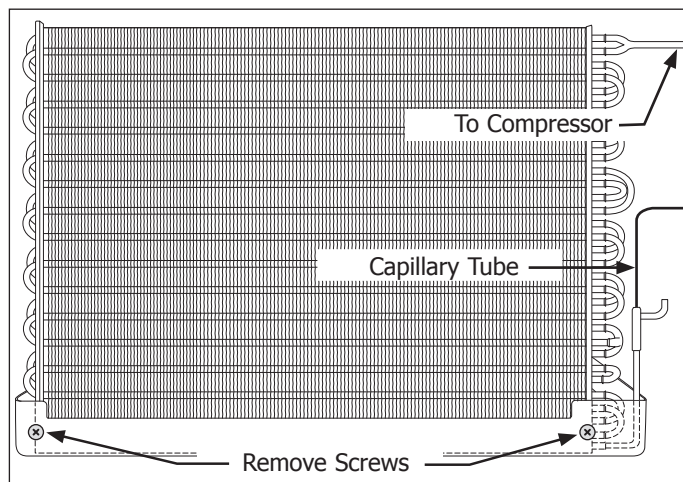


Figure 4-122.

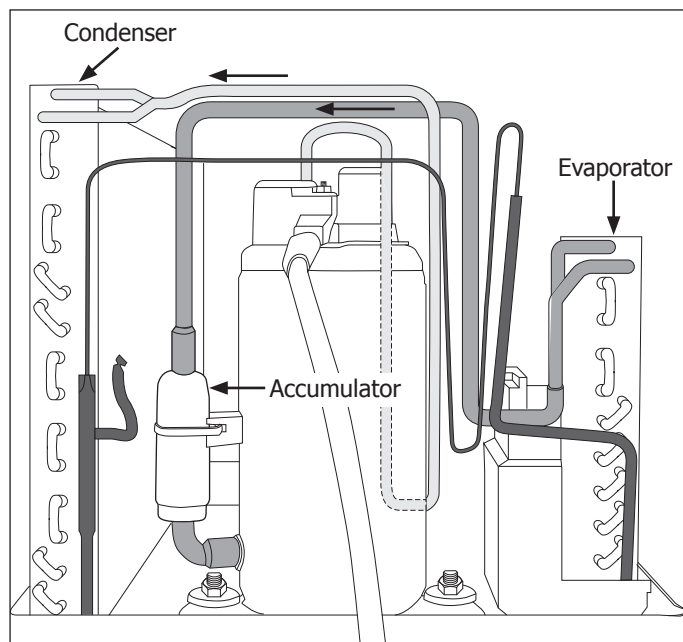


Figure 4-123.

### Evaporator Removal

To remove the evaporator:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve.
3. Discharge capacitor. To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.
4. Remove the fan and blower assembly.
5. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
6. Disconnect inlet and outlet lines from evaporator.
7. Extract the two screws securing the bottom front of the evaporator to the unit base. (See Figure 4-124)
8. Carefully lift the evaporator out from the unit base.

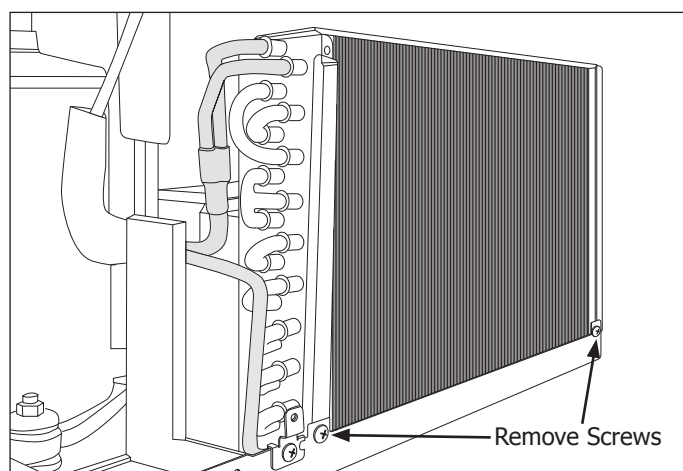


Figure 4-124.

## Section 4 Component Teardown



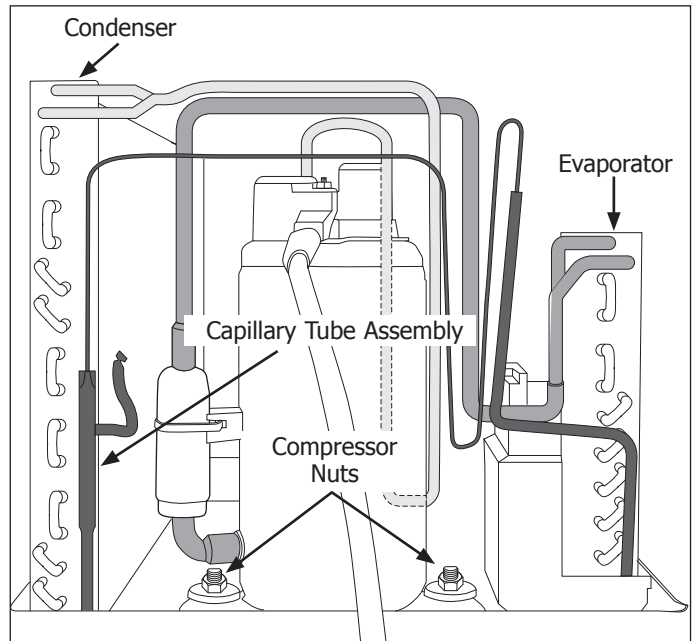
### NOTE

**The compressor is not a serviceable component for Model FAA055P7A.**

### Compressor Removal

To remove the capillary tube assembly:

1. Disconnect power supply from unit.
2. Remove the front panel and cabinet wrapper/sleeve.
3. Discharge capacitor. To discharge the high voltage capacitor, wait for 60 seconds and then short-circuit the connection of the high-voltage capacitor (that is the connecting lead of the high-voltage rectifier) against the chassis with the use of an insulated screwdriver.
4. Disconnect compressor electrical leads from control board and capacitor. Feed wire leads through access hole in control panel bulkhead into compressor area.
5. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
6. Disconnect the compressor inlet line above the accumulator. Disconnect discharge line one inch from the outlet.
7. Use a 13mm socket or wrench and remove the 3 nuts securing the compressor to the unit base. (See Figure 4-125)
8. Remove the compressor electrical components by using an 8mm socket or wrench and remove the nut securing the cover to the top of the compressor.



**Figure 4-125.**

## Section 5 Troubleshooting and Testing

### AIR CONDITIONER VOLTAGE LIMITS

Low voltage is a common cause of trouble in the operation of any room air conditioner. Improper voltage may cause one or more of the following problems:

1. Unit will not start.
2. Compressor motor cycling on motor protector.
3. Premature failure of motor protector.
4. Blown fuses.
5. Premature failure of compressor or fan motor.
6. Noticeable dimming of lights when air conditioner is running.
7. Evaporator icing. Low voltage may reduce fan speed resulting in inadequate air flow over evaporator, thereby allowing it to ice up.

Low voltage can also be the direct result of inadequately wired circuits, extension cords, or loose fuses and connections to the power supply. Voltage may also be a general condition in the area (a responsibility of the power company).

All units will start and run on the minimum voltage stated in the chart to the left (Figure 5-1), and will perform satisfactorily if the voltage remains constant. Low voltage caused by defective wiring will not remain constant under load.

To test for low voltage, use a reliable meter with sufficient capacity to measure the required voltage. Take measurements at the electric power entry point and at the electric outlet serving the air conditioner. Take readings with the unit off, while the unit is starting, and again while the unit is running. The lowest reading should not drop below the lowest value listed in the chart.

### HIGH VOLTAGE

High voltage can be equally troublesome, causing motors to overheat, cycle on their protectors, or break down electrically. This problem can only be solved by the power company.

### ELECTRONIC CONTROL

This control is not repairable. If any component in the control is defective, the entire control must be replaced.

NAMEPLATE RATING	MINIMUM	MAXIMUM
115 VAC	103.5 VAC	126.5 VAC
230 VAC	207 VAC	253 VAC
208/230	197.5 VAC	253 VAC

Figure 5-1.



### CAUTION

**Repair or replace any malfunctioning line voltage component before testing or replacing the electronic control. DO NOT assume a service problem is directly caused by the electronic control system. A line voltage component (including power cord and wiring) that has opened, shorted, grounded or otherwise malfunctioned, may have created a service problem.**



## Section 5 Troubleshooting and Testing

### Troubleshooting Procedures

Symptom	Possible Cause
Fan motor will not run.	<ol style="list-style-type: none"><li>1. No power.</li><li>2. Power supply cord.</li><li>3. Selector switch.</li><li>4. Energy saving switch (if applicable).</li><li>5. Electronic control (if applicable).</li><li>6. Wire disconnected or connection loose.</li><li>7. Capacitor. (Discharge capacitor before testing.)</li><li>8. Defective fan motor windings.</li><li>9. Will not rotate. Fan blade hitting shroud or blower wheel hitting scroll. (Motor cycles on overload.)</li></ol>
Fan motor runs intermittently.	<ol style="list-style-type: none"><li>1. Cycle on motor protector.</li></ol>
Fan motor noisy.	<ol style="list-style-type: none"><li>1. Condenser fan blade or evaporator blower wheel.</li><li>2. Loose power clamp or set screw.</li><li>3. Worn bearings.</li><li>4. Grommets (if applicable).</li></ol>
Compressor will not run, but fan motor runs.	<ol style="list-style-type: none"><li>1. Voltage.</li><li>2. Wiring.</li><li>3. Selector switch.</li><li>4. Temperature control.</li><li>5. Capacitor. (Discharge capacitor before testing.)</li><li>6. Compressor.</li><li>7. Motor protector (external).</li><li>8. Motor protector (internal).</li><li>9. Electronic control (if applicable).</li><li>10. Hard starting.</li></ol>
Compressor cycles on motor protector.	<ol style="list-style-type: none"><li>1. Voltage.</li><li>2. Motor protector (external).</li><li>3. Motor protector (internal).</li><li>4. Fan motor.</li><li>5. Condenser air flow restriction.</li><li>6. Condenser fins damaged.</li><li>7. Capacitor.</li><li>8. Wiring.</li><li>9. Refrigerant system.</li></ol>
No heat.	<ol style="list-style-type: none"><li>1. No power.</li><li>2. Selector switch position.</li><li>3. Temperature control position.</li><li>4. Fan motor.</li><li>5. Heating element.</li><li>6. Selector switch.</li><li>7. Temperature control.</li><li>8. Terminals and connectors.</li></ol>



## Section 5 Troubleshooting and Testing

Symptom	Possible Cause
Insufficient cooling.	<ol style="list-style-type: none"> <li>1. Low capacity.</li> <li>2. Air filter.</li> <li>3. Exhaust door open.</li> <li>4. Unit undersized.</li> </ol>
Excessive noise.	<ol style="list-style-type: none"> <li>1. Evaporator blower wheel.</li> <li>2. Condenser wheel.</li> <li>3. Copper tubing.</li> <li>4. Compressor internal noise.</li> <li>5. Fan motor.</li> </ol>
Excessive water or condensation.	<ol style="list-style-type: none"> <li>1. Unit operating under extremely high humidity conditions.</li> </ol>
No cooling.	<ol style="list-style-type: none"> <li>1. Refrigerant leak.</li> </ol>
Unit is cooling but room is not cool.	<ol style="list-style-type: none"> <li>1. Amps and watts.</li> <li>2. Sealed refrigeration system.</li> </ol>
Wattage decreases slowly until abnormally low.	<ol style="list-style-type: none"> <li>1. Undercharged, restricted strainer or plugged restrictor tube.</li> </ol>
Wattage decreases immediately	<ol style="list-style-type: none"> <li>1. No refrigerant.</li> <li>2. Compressor defective.</li> </ol>
Wattage continuously high.	<ol style="list-style-type: none"> <li>1. Refrigerant overcharge.</li> </ol>
Evaporator coil partially frosted.	<ol style="list-style-type: none"> <li>1. System low on refrigerant.</li> </ol>
Evaporator completely iced.	<ol style="list-style-type: none"> <li>1. Low outside temperature.</li> </ol>
Fan motor will not rotate during heat cycle. (Heat/Cool models only.)	<ol style="list-style-type: none"> <li>1. Thermostatic drain valve. (Water level control, if applicable.)</li> </ol>
Air conditioner will not operate.	<ol style="list-style-type: none"> <li>1. Wall plug disconnected. Push plug firmly into wall outlet.</li> <li>2. House fuse blown or circuit breaker tripped. Replace fuse with time delay type or reset circuit breaker.</li> <li>3. Control is OFF. Turn Control ON and set to desired FAN or COOL setting.</li> <li>4. Unit turned off and then on too quickly, wait 3 minutes before compressor will automatically restart.</li> <li>5. Thermostat set too High. Adjust thermostat to lower number for cooling</li> </ol>
Air from unit does not feel cold enough.	<ol style="list-style-type: none"> <li>1. Room temperature below 60°F (16°C). Cooling may not occur until room temperature rises above 60°F (16°C).</li> <li>2. Temperature sensor touching cold coil, located behind air filter. Pull sensor away from coil.</li> <li>3. Reset to a Lower temperature.</li> <li>4. Compressor shut-off by changing modes. Wait approximately 3 minutes, and listen for compressor to restart when set in the COOL modes.</li> </ol>

## Section 5 Troubleshooting and Testing

Symptom	Possible Cause
Air conditioner cooling, but room is too warm - ice forming on cooling coil behind decorative front.	<ol style="list-style-type: none"> <li>1. Outdoor temperature below 60°F (16°C). To defrost the coil, set selector to FAN ONLY Mode.</li> <li>2. Air filter may be dirty. Clean filter. Refer to Care and Cleaning section. To defrost, set selector to FAN ONLY Mode.</li> <li>3. Temperature is set too Low for night-time cooling. To defrost the coil, set to FAN ONLY Mode. Then, set Temperature to a Higher number.</li> </ol>
Air conditioner cooling, but room is too warm - NO ice forming on cooling coil behind decorative front.	<ol style="list-style-type: none"> <li>1. Dirty air filter - air restricted. Clean air filter.</li> <li>2. Temperature is set too High. Set temperature to a Lower number.</li> <li>3. Air directional louvers positioned improperly. Position louvers for better air distribution.</li> <li>4. Front of unit is blocked by drapes, blinds, furniture, etc. - restricts air distribution. Clear blockage in front of unit.</li> <li>5. Doors, windows, registers, etc. open - cold air escapes. Close doors, windows, registers, etc.</li> <li>6. Unit recently turned on in hot room. Allow additional time to remove "stored heat" from walls, ceiling, floor and furniture.</li> </ol>
Air conditioner turns on and off rapidly.	<ol style="list-style-type: none"> <li>1. Dirty air filter - air restricted. Clean air filter.</li> <li>2. Outside temperature extremely hot. Set FAN speed to a faster setting to bring air past cooling coils more frequently.</li> </ol>
Noise when unit is cooling.	<ol style="list-style-type: none"> <li>1. Air movement sound. This is normal. If too loud, set to a slower FAN setting.</li> <li>2. Sound of fan hitting water-moisture removal system. This is normal when humidity is high. Close doors, windows and registers.</li> <li>3. Window vibration - poor installation. Refer to installation instructions or check with installer.</li> </ol>
Water dripping INSIDE when unit is cooling.	<ol style="list-style-type: none"> <li>1. Improper installation. Tilt air conditioner slightly to the outside to allow water drainage. Refer to installation instructions - check with installer.</li> </ol>
Water dripping OUTSIDE when unit is cooling.	<ol style="list-style-type: none"> <li>1. Unit removing large quantity of moisture from humid room. This is normal during excessively humid days.</li> </ol>
Room too cold.	<ol style="list-style-type: none"> <li>1. Setting too low. Increase temperature setting.</li> <li>2. Remote sensing activated (on some models) and remote control located in Hot Spot-Relocate remote control or deactivate remote sensing.</li> </ol>
Remote sensing deactivating Prematurely (some models).	<ol style="list-style-type: none"> <li>1. Remote control not located within range. Place remote control within 20 feet &amp; 140° Radius of the front of the unit. Remote control obstructed. Remove obstruction.</li> </ol>

## Section 5 Troubleshooting and Testing

### Evaporator Mounted Thermistor Locations

If unit is not cooling properly, check location of thermistor mounted to the front of the evaporator for the correct mounting position. The tip of the thermistor must not be touching the fins of the evaporator.

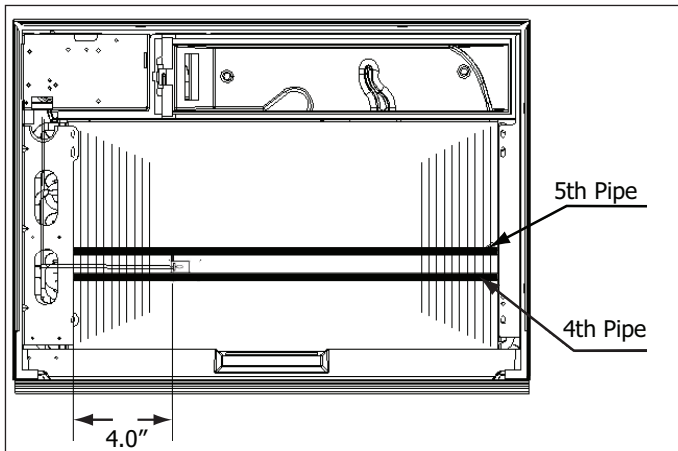


Figure 5-2. FAS Series Thermistor Location

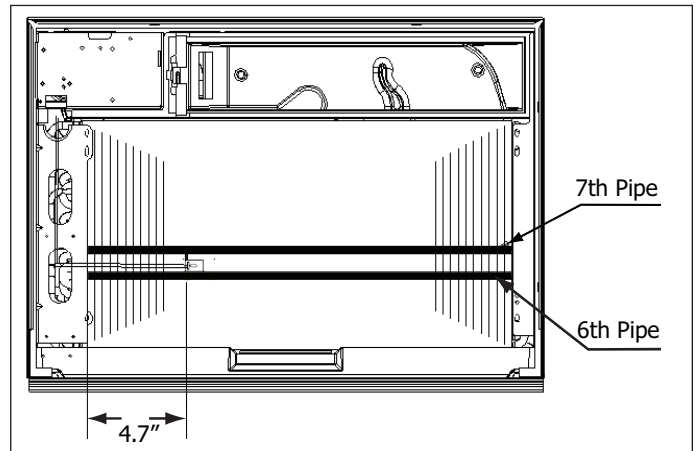


Figure 5-3. FAM Series Thermistor Location

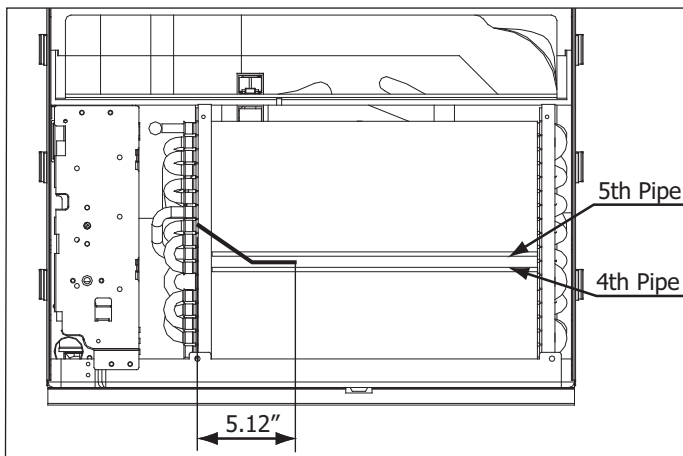


Figure 5-4. FAX Series Thermistor Location

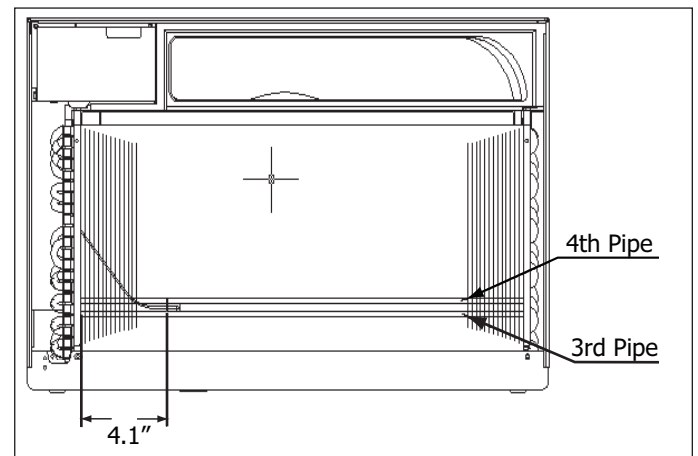


Figure 5-5. FAH Series Thermistor Location

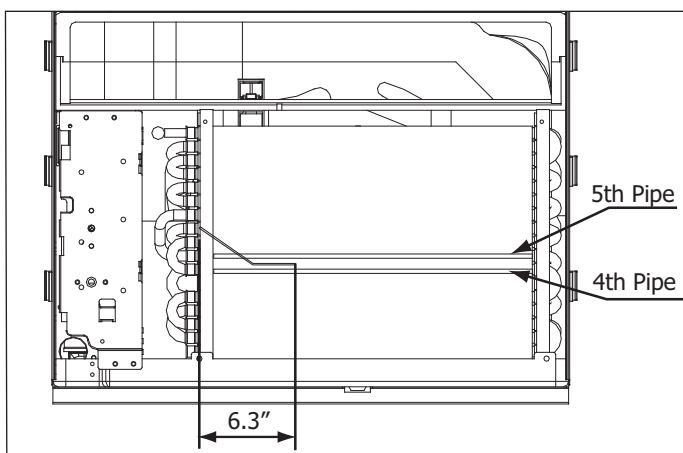


Figure 5-6. FAC Series Thermistor Location

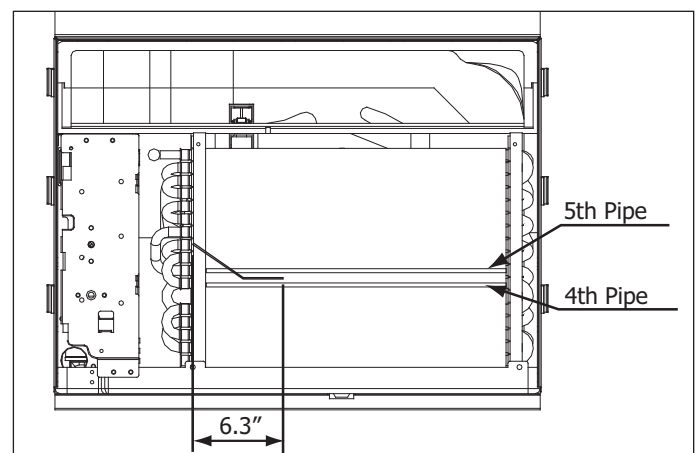
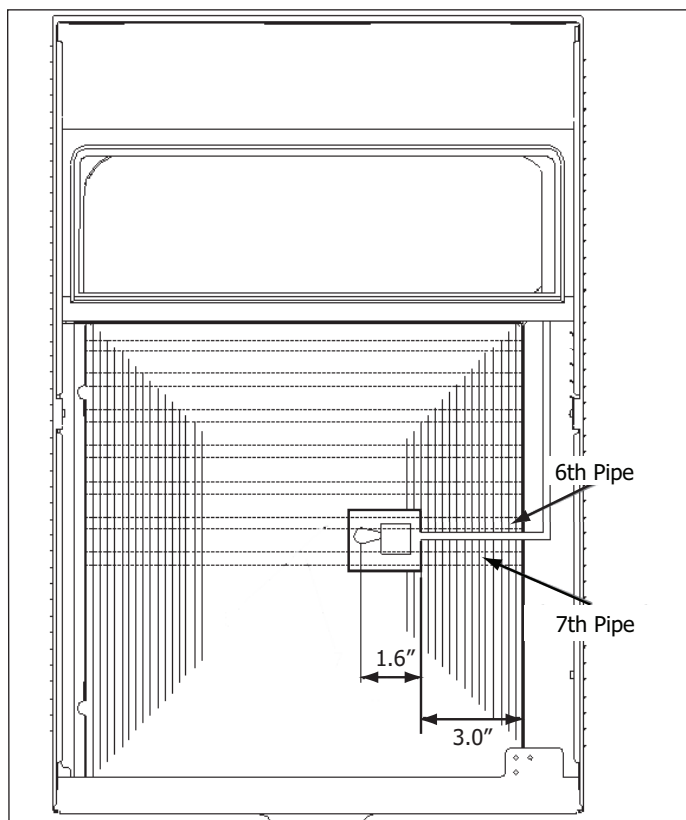


Figure 5-7. FAA Series Thermistor Location

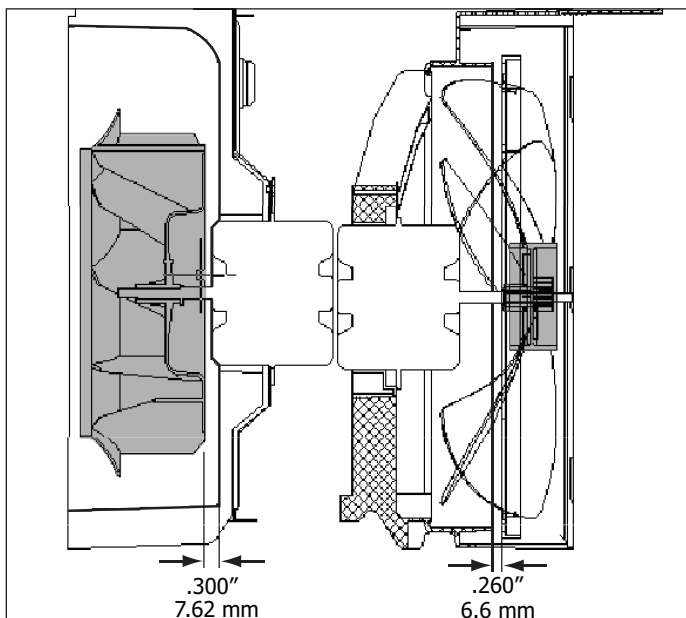
## Section 5 Troubleshooting and Testing



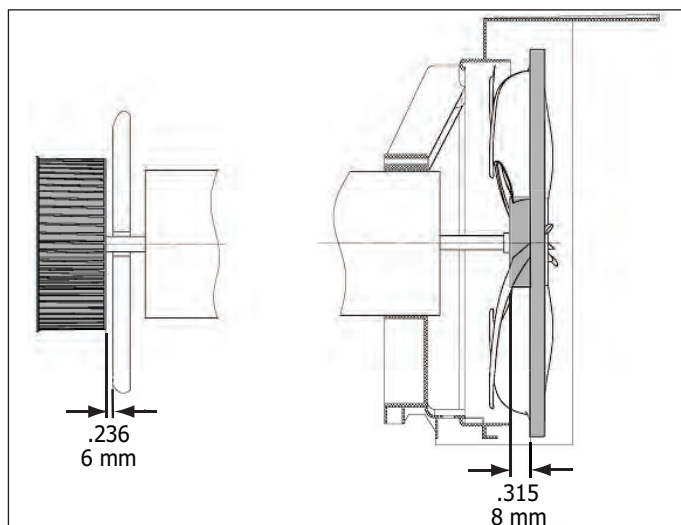
**Figure 5-8. FAK Series Thermistor Location**

### Fan Blade Spacing

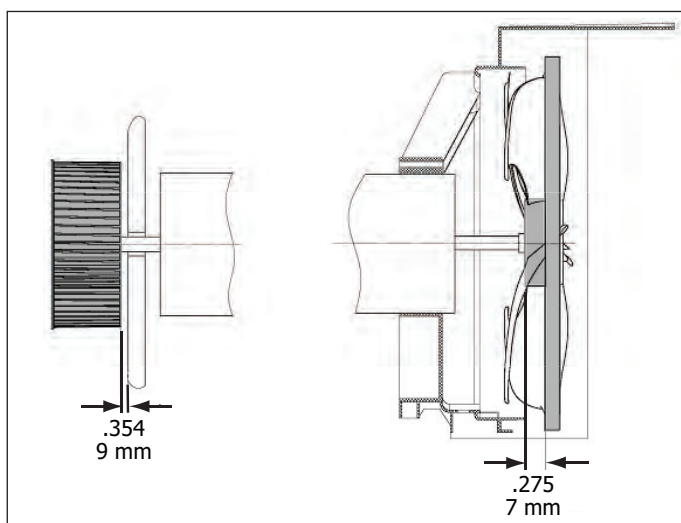
Incorrect fan blade spacing may cause improper cooling and/or heating. Inspect the unit for the proper mounting of the fan blade and blower mounted on the condenser motor shaft.



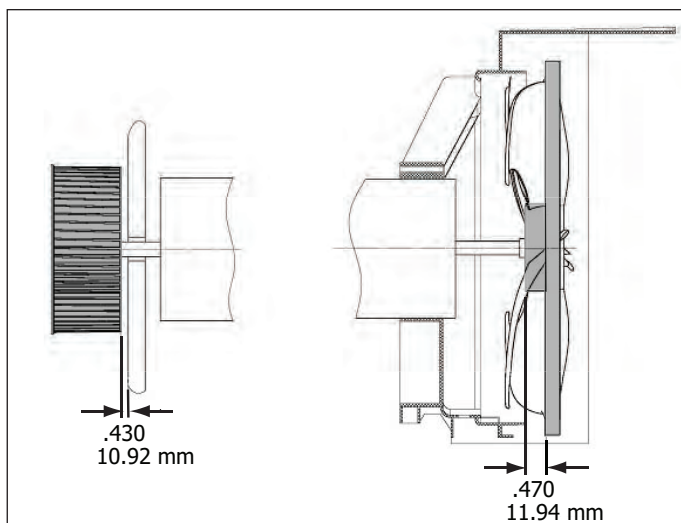
**Figure 5-9. FAH Series Fan Blade Spacing**



**Figure 5-10. FAC Series Fan Blade Spacing**



**Figure 5-11. FAK Series Fan Blade Spacing**



**Figure 5-12. FAM and FAS Series Fan Blade Spacing**

### **IMPORTANT**

The purpose of this service manual is to give the service technician an understanding of the changes in refrigerants and sealed system service. Persons attempting to use this service manual to make repairs to sealed system refrigeration systems should have electrical training as well as training in sealed system repairs. The person making the repairs must know and understand all laws (Local and International) governing handling of all refrigerants. The technician must be trained in the use of recovery and recycling equipment. Electrolux Home Products, Inc. cannot be responsible, nor assume any liability, for injury or damage of any kind arising from the use of this manual.

### **NOTE**

Electrolux does not permit the use of recovered refrigerant in the servicing of our products for in-warranty and out-of-warranty repairs or for products covered by service contracts. Therefore, only new refrigerant or refrigerant that has been reclaimed back to new specifications by a refrigerant manufacturer is to be used.

### **IMPORTANT**

Effective July 1, 1992, the United States clean air act governs the disposal of refrigerants such as R-22. Therefore, when discharging or purging the sealed system use an EPA approved refrigerant recovery system as outlined in the final rule on the protection of stratospheric ozone and refrigerant recycling, which was published in the Federal Register May 14, 1993.

### **IMPORTANT**

#### **Safety and CFC Certification**

Complying with Section 608 Refrigerant Recycling Rule: <http://www.epa.gov/ozone/title6/608/608fact.html#techcert>

EPA has established a technician certification program for persons ("technicians") who perform maintenance, service, repair, or disposal that could be reasonably expected to release refrigerants into the atmosphere.

The definition of "technician" specifically includes and excludes certain activities as follows:

Any person who performs maintenance, service, or repair that could reasonably be expected to release class I (CFC) or class II (HCFC) substances from appliances, into the atmosphere. Technician also means any person performing disposal of appliances, except for small appliances, MVACs, and MVAC-like appliances that, could be reasonably expected to release class I or class II refrigerants from appliances into the atmosphere.

#### **Small appliance is defined as:**

Any of the following products that are fully manufactured, charged, and hermetically sealed in a factory with five pounds or less of refrigerant: refrigerators and freezers designed for home use, room air conditioners (including window air conditioners and packaged terminal air conditioners), packaged terminal heat pumps, dehumidifiers, under-the-counter ice makers, vending machines, and drinking water coolers.

The Agency has developed four types of certification:

1. For servicing small appliances (Type I).
2. For servicing or disposing of high- or very high-pressure appliances, except small appliances and MVACs (Type II).
3. For servicing or disposing of low-pressure appliances (Type III).
4. For servicing all types of equipment (Universal).

Technicians are required to pass an EPA-approved test given by an EPA-approved certifying organization to become certified under the mandatory program. Section 608 Technician Certification credentials do not expire. Overview of Issues on EPA Certification Test: <http://www.epa.gov/ozone/title6/608/technicians/certoutl.html>

R-22 requires training of installation and service personnel in the proper and safe handling of R-22.

Many equipment manufacturers are well aware of the concerns and safety issues of working with R-22 and other HCFC refrigerants and are requiring installation and service professionals who purchase their R-22 systems to be R-22 Certified.

## Section 6 Sealed System

### Service Diagnostic Tips

A prime requisite on the initial contact is: Always allow the customer to explain the problem. Many times the trouble can be diagnosed more quickly, based on the customer's explanation. Most of all, do not jump to conclusions until you have heard the full story and have evaluated the information obtained from the customer. Then proceed with your diagnosis.

Before starting a test procedure, connect the product service cord to the power source, through a wattmeter, combined with a voltmeter. Then make a visual inspection and operational check of the air conditioner to determine the following:

1. Is the product properly leveled?
2. Is the product located for proper dissipation of heat from the condenser? Check install location.
3. Feel condenser. With compressor in operation, condenser should be hot, with gradual reduction in temperature from entry to exit of condenser.
4. Is evaporator fan properly located on motor shaft?
5. Is the thermostat sensing element properly positioned?
6. Observe frost pattern on evaporator.
7. Check control setting.

For air-conditioners, check room size, temperature, amount of people, windows, and other factors that increase the load on the product. After this phase of diagnosis is completed, a thorough operational check should be made of the refrigeration system.

### Definitions

#### Recovery:

To remove refrigerant in any condition from a system and store it in an external container without necessarily testing or processing it in any way.

#### Recycling:

To clean refrigerant for reuse by oil separation and single or multiple passes through devices, such as replaceable core filter-driers, which reduce moisture, acidity and particulate matter. This term usually applies to procedures implemented at the field job site or at a local service shop.

#### Reclaim:

To reprocess refrigerant to new product specifications by means which may include distillation, will require chemical analysis of the refrigerant to determine that appropriate product specifications are met. This term usually implies the use of processes or procedures available only at a reprocessing or manufacturing facility.

### **WARNING**

**Wear approved safety glasses when working with or on any pressurized system or equipment. have an approved dry type fire extinguisher handy when using any type of gas operated torch.**

### **Soldering**

1. All joints to be soldered must have a proper fit. Clearance between tubes to be soldered should be from .001" to .006". It is not practical to actually measure this; however, you do not want a dry fit or loose fit. Tubing joints should overlap about the distance of their diameter except for restrictor tubes, which should be inserted 1.25".
2. Clean all joint areas with fine steel wool or preferably an abrasive cloth, such as grit cloth No. 23 or Scotch-Brite.
3. Apply a thin film of liquid flux recommended for silver soldering to surfaces to be joined, and to surfaces immediately adjacent to joint.

### **CAUTION**

**During application of heat, use wet cloths to prevent heat from conducting to areas other than the soldered joint. Use a sheet of metal or torch guard pad as a heat deflector to keep flame away from inflammable materials and painted surfaces.**

4. Align tubing so no stress is on joint. Do not move tubing while solder is solidifying or leaks will result.
5. Use a torch of adequate capacity so joint can be quickly heated with a minimum of heat travel to other points. Use a good grade of silver solder.
6. Solder connections. Use a good grade of silver solder. A 45% silver solder is recommended. If tubing is properly cleaned and fluxed, solder will flow readily. Use only enough solder to make a good bond.
7. Allow joint to cool, then wash exterior with water to remove flux.

### **Safety Warnings**

#### **Compressor Testing**

Whenever testing a compressor, extreme caution should be used to prevent damaging the terminals. A compressor with a damaged terminal or a grounded winding can expel a terminal from its insulated housing when the compressor is energized. If this happens, a mixture of refrigerant and oil will be released that could be ignited by an external heat source (open flame, heater, etc.). Also, if there is air in the system when this happens, a spark at the compressor shell could ignite the refrigerant and oil mixture.

#### **Charging Sealed Systems**

Overcharging a refrigeration system with refrigerant can be dangerous. If the overcharge is sufficient to immerse the major parts of the motor and compressor in liquid refrigerant, a situation has been created which, when followed by a sequence of circumstances can lead to the compressor shell seam separating.

When a hydraulic block occurs, the compressor is prevented from starting. This condition is known as locked rotor. Electric current continues to flow through the compressor motor windings which become, in effect, electric resistance heaters. The heat produced begins to vaporize the excess refrigerant liquid causing a rapid increase in system pressure. If the compressor protective devices fail, the pressure within the system may rise to extremes far in excess of the design limits. Under these conditions, the weld seam around the compressor shell can separate with explosive force, spewing oil and refrigerant vapor which could ignite. To eliminate this exceedingly rare but potential hazard, never add refrigerant to a sealed system. If refrigerant is required, evacuate the existing charge and recharge with the correct measured amount of the refrigerant specified for the system.



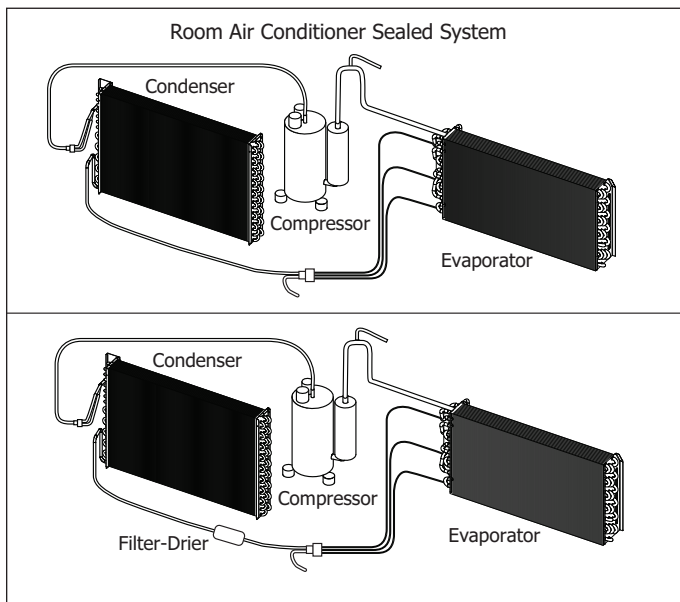
## Section 6 Sealed System

### Basic Components

The basic components of an air conditioner are a compressor, condenser, evaporator and heat exchanger (capillary tube and suction line).

### Refrigerant Cycle

A typical sealed refrigeration system consists of a cooling coil (evaporator) located on the room side, a heat rejection coil (condenser) located outside, and an electric self-contained motor/compressor to circulate a refrigerant through the system and develop the necessary pressure differential to make the system work. Copper tubing, sized to carry the volume of refrigerant to be circulated, connects these components in a continuous loop, evaporator to compressor to condenser then back to the evaporator. The tube connecting the condenser to the evaporator also serves as a refrigerant flow control. This tube (restrictor tube) has a very small inside diameter. The combination of this small diameter and extra length of this tube restricts the flow of liquid refrigerant, maintaining the pressure differential necessary for the function of the refrigeration system. A cone shaped strainer is placed in the last pass of the condenser to prevent any foreign material from clogging the restrictor tube.



**Figure 6-1. Air-Conditioner Sealed System**  
Lower illustration shows location of added filter-drier after servicing the sealed system.

The operation of the refrigeration system involves three basic physical laws:

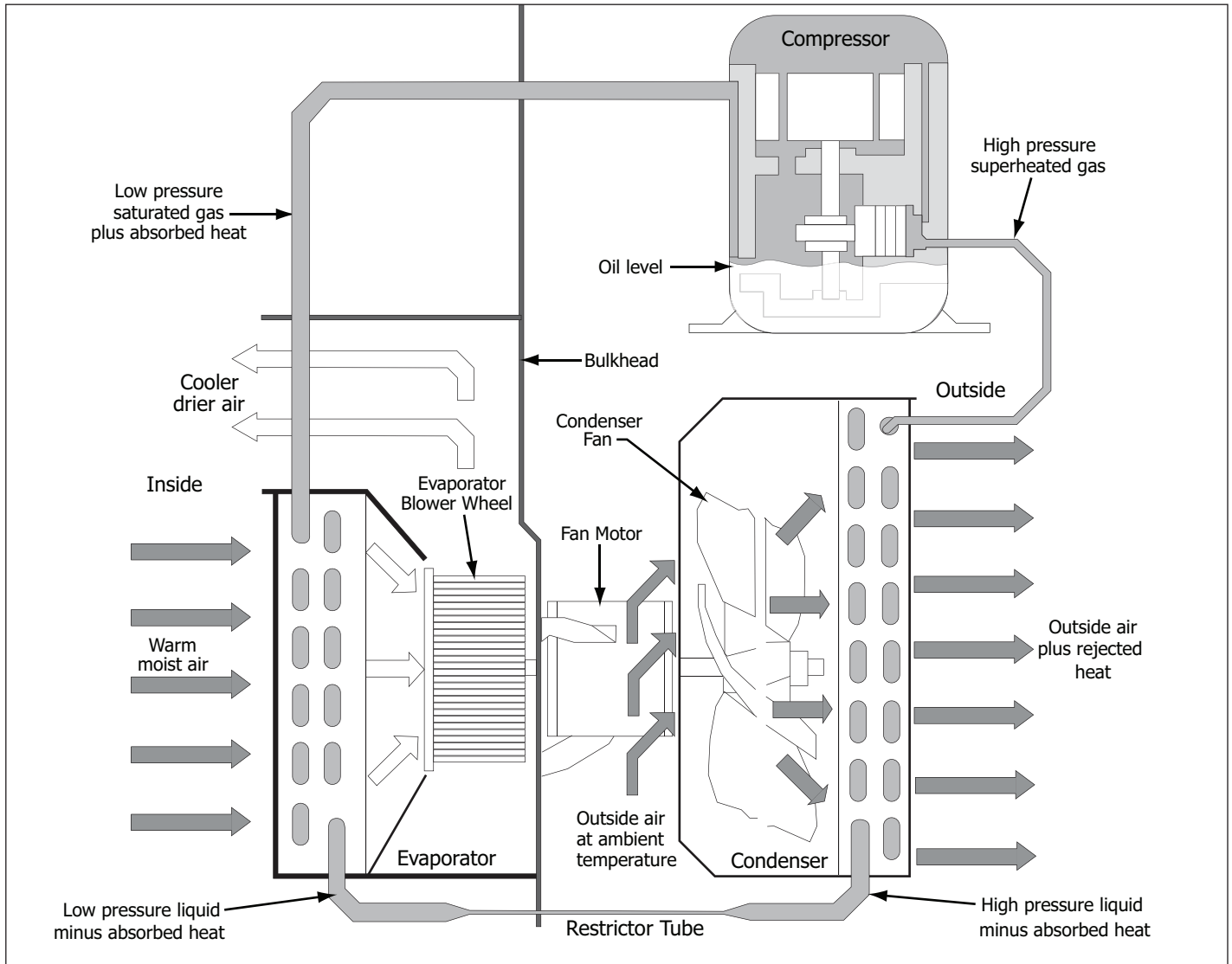
1. The physical state of a substance (solid, liquid or gas) is directly related to the heat contained in the substance.
2. A great amount of heat is required to change the state of a substance (solid to liquid, liquid to gas, and visa versa) with no change in its temperature.
3. The temperature at which a substance changes from liquid to gas and gas to liquid depends upon the pressure on the substance.

In operation, the compressor lowers the pressure on the liquid refrigerant in the evaporator to the point at which the refrigerant will change from a liquid to a gas at temperatures ranging between 35°F and 50°F. The heat required for this change of physical state is obtained from the room air circulated through the evaporator fins. Heat is absorbed by the refrigerant, not only from the air, but from moisture in the air as well. The air is cooled and the moisture condenses on the evaporator fins.

As the refrigerant liquid continues to vaporize, the pressure in the evaporator tends to rise. However, the compressor removes vapor at rate which maintains the desired pressure and temperature in the evaporator.

The compressor discharges the refrigerant gas into the condenser where the pressure builds up against the restrictor tube. As the pressure of the gas increases, so does its temperature. When the temperature of the gas in the condenser exceeds the temperature of the air passing through the condenser, heat is transferred from the gas to the outside air. This loss of heat causes the refrigerant gas to condense back to a liquid.

The small diameter restrictor tube between the condenser and the evaporator maintains the pressure difference created by the compressor, and meters the liquid refrigerant back to the evaporator. The refrigerant cycle is now complete and will continue until the compressor is turned off by the thermostat.



**Figure 6-2. Air-Conditioner Sealed System**

### Low/High Side Leak or Undercharge

A loss of refrigerant can result in any of the following:

1. Excessive or continuous compressor operation.
2. Above normal freezer compartment temperature.
3. A partially frosted evaporator (depending on amount of refrigerant loss).
4. Below normal freezer compartment temperature.
5. Low suction pressure (vacuum).
6. Low wattage.

The condenser will be "warm to cool", depending on the amount of refrigerant lost. In the case of a low side refrigerant leak resulting in complete loss of refrigerant, the compressor will run but will not refrigerate. Suction pressure will drop below atmospheric pressure and air and moisture will be drawn into the system saturating the filter-drier.

If there is reason to believe the system has operated for a considerable length of time with no refrigerant and the leak occurred in the low side of the system, excessive amounts of moisture may have entered the system. In such cases the two stage service filter-drier part number 5303918288 and vacuum procedure listed under Refrigerant Leaks need to be followed to prevent repetitive service.

If a slight undercharge of refrigerant is indicated and no leak can be found after a thorough leak test, the charge can be corrected without changing the compressor.

If a high side leak is located and some refrigerant remains in the system it is not necessary to change the compressor.

## Section 6 Sealed System

### Testing for Refrigerant Leaks

#### NOTE

The line piercing valve (clamp-on type) should be used for test purposes only. It must be removed from system after it has served its purpose.

If the system is diagnosed as short of refrigerant and the system has not been recently opened, there is probably a leak in the system. Adding refrigerant without first locating and repairing the leak or replacing the component will not permanently correct the difficulty. The leak must be found. Sufficient refrigerant may have escaped to make it impossible to leak test effectively. In such cases, add a 1/4" line piercing valve to the compressor process tube. Add sufficient refrigerant vapor to increase the pressure to 40 to 50 lb. per sq. in. Check the low side for leaks. Run the compressor 2 or 3 minutes and check the high side for leaks. Recover refrigerant using an EPA approved recovery system.

### Compressor Oil Contamination

To check for contamination, obtain oil sample from old compressor.

1. If the oil has burned odor, but no color change or residue, follow instructions on the next page "Installing A New Compressor".
2. If oil has a burned odor and a sugar or gritty feel as well as showing signs of contamination (dark color), follow instructions on page 6-9, "To Flush The System". Remove as much of contamination as possible from system before installing new compressor and filter-drier.

#### CAUTION

**NEVER install a new compressor without first checking for possible system contamination.**

#### NOTE

It is recommended that system be flushed with dry Nitrogen. However, if refrigerant is used to flush the system you must look at the serial plate to see what type of refrigerant is used in the system. This is the only refrigerant that can be used to flush the system and it must be recovered.

### Refrigerant Vapor Pressures

Temp °F	Temp °C	R-22	R407C Liquid Pressure	R407C Vapor Pressure	R-410A
-40.0	-40.0	0.5	3.0	-4.4	11.6
-35.0	-37.2	2.6	5.4	-0.6	14.9
-30.0	-34.4	4.9	8.0	1.8	18.5
-25.0	-31.7	7.4	10.9	4.1	22.5
-20.0	-28.9	10.1	14.1	6.6	26.9
-15.0	-26.1	13.2	17.6	9.4	31.7
-10.0	-23.3	16.5	21.3	12.5	36.8
-5.0	-20.6	20.1	25.4	15.9	42.5
0.0	-17.8	24.0	29.9	19.6	48.6
5.0	-15.0	28.2	34.7	23.6	55.2
10.0	-12.2	32.8	39.9	28.0	62.3
15.0	-9.4	37.7	45.6	32.8	70.0
20.0	-6.7	43.0	51.6	38.0	78.3
25.0	-3.9	48.8	58.2	43.6	87.3
30.0	-1.1	54.9	65.2	49.6	96.8
35.0	1.7	61.5	72.6	56.1	107
40.0	4.4	68.5	80.7	63.1	118
45.0	7.2	76.0	89.2	70.6	130
50.0	10.0	84.0	98.3	78.7	142
55.0	12.8	92.6	108	87.3	155
60.0	15.6	102	118	96.8	170
65.0	18.3	111	129	106	185
70.0	21.1	121	141	117	201
75.0	23.9	132	153	128	217
80.0	26.7	144	166	140	235
85.0	29.4	156	180	153	254
90.0	32.2	168	195	166	274
95.0	35.0	182	210	181	295
100.0	37.8	196	226	196	317
105.0	40.6	211	243	211	340
110.0	43.3	226	261	229	365
115.0	46.1	243	280	247	391
120.0	48.9	260	300	266	418
125.0	51.7	278	321	286	446
130.0	54.4	297	342	307	476
135.0	57.2	317	365	329	507
140.0	60.0	337	389	353	539
145.0	62.8	359	----	----	573
150.0	65.6	382	----	----	608

Figure 6-3.

### Installing a New Compressor

Replacement of the compressor must be done in a continuous sequence so the system is exposed to the atmosphere no longer than necessary.

All replacement compressors are shipped with rubber plugs in the suction and discharge tubes and contain the correct oil charge and a holding charge of inert gas. Before installing the replacement compressor, remove the discharge plug and check for the pop sound of the inert gas leaving the compressor.

#### CAUTION

**DO NOT use compressor if you do not hear this sound.**

If the compressor checks OK, reinstall the plug. Do not remove any of the plugs again until the compressor is in position and you are ready to braze the lines.

A new compressor which is cold (e.g. after having been kept in a cold service van) should be left to warm to the surrounding temperature before the plugs on the compressor connections are removed. This will help prevent condensation from forming in the oil and the compressor. Also, avoid opening the system when any of the components or lines are cold.

A process tube is connected onto the high-side process tube where the line splits into capillary tubes. The other process tube is connected to the tubing prior to entering the accumulator.

#### WARNING

**DO NOT OPERATE RECIPROCATING COMPRESSORS WHEN CHARGING LIQUID REFRIGERANT INTO SYSTEM THROUGH ITS PROCESS TUBE.**

Follow the numbered sequence for all products:

1. Disconnect electrical supply to unit.
2. Remove all components necessary to access the compressor assembly in the unit.
3. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
4. Remove leads from compressor motor terminals.
5. Remove mounting nuts and washers.
6. After refrigerant is completely recovered, cut suction and discharge lines as close to compressor as possible. Leave only enough tubing to pinch off and seal defective compressor. Plug or tape any open system tubing to avoid entrance of moisture and air into system. Remove inoperable compressor and transfer mounting parts to new compressor.
7. Release holding charge (release slowly to avoid oil discharge) on new compressor to ensure there is no leak in seam or tubing. Reinstall rubber plug.
8. Install new compressor in exact same manner as original compressor.
9. Reform both suction and discharge lines to align with new compressor. If they are too short, use additional lengths of tubing. Joints should overlap 0.5" to provide sufficient area for good solder joints. Clean and mark area where tubing should be cut. Cut tubing with tubing cutter. Work quickly to avoid letting moisture and air into system.
10. Solder all connections according to soldering procedure.

#### NOTE

If low-side process tube is too short, silver solder four inch piece of tubing onto process tube at this time.

#### CAUTION

**On R-22 systems, compressor must NOT be left open to atmosphere for more than 10 minutes to prevent moisture contamination of oil.**

11. Install filter-drier between condenser outlet and the capillary tube connection.
12. Evacuate and charge system using recommended procedure described under Evacuating and Recharging.
13. Reconnect compressor terminal leads in accordance with unit wiring diagram and reassemble unit.

## Section 6 Sealed System

### Evaporator and Suction Line Replacement

1. Disconnect electrical supply to unit.
2. Disassemble the product enough to get access to the compressor (refer to Component Removal Section).
3. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
4. Remove evaporator from its installation position.
5. Clean suction and capillary lines with abrasive cloth. Connect lines to replacement evaporator and solder joints.
6. Install evaporator assembly in air conditioner.
7. Install filter-drier between condenser outlet and the capillary tube connection.
8. Evacuate and charge system using recommended procedure described under Evacuating and Recharging, then reassemble unit.

### Condenser Replacement

1. Disconnect electrical supply to unit.
2. Disassemble the product enough to get access to the compressor (refer to Component Removal Section).
3. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
4. After refrigerant is completely recovered, disconnect inlet and discharge lines from condenser.
5. Remove condenser.
6. Install replacement condenser.
7. Install filter-drier between condenser outlet and the capillary tube connection.
8. Evacuate and charge system using recommended procedure described under Evacuating and Recharging, then reassemble unit.

### Final Leak Test

1. With the refrigerator turned OFF leak test all low-side system components.
2. Turn unit ON and run until the condenser is warm. Leak test the high-side system components.

### Air Conditioner Air Temperatures

Temperatures are affected by frost accumulation on the evaporator, service load, ambient temperature, percent of relative humidity, thermostat calibration (cut-in and cut-out), and by compressor efficiency.

### Line Voltage

It is essential to know the line voltage at the product. A voltage reading should be taken at the instant the compressor starts, and also while the compressor is running. Line voltage fluctuation should not exceed 10% plus or minus, from nominal rating. Low voltage will cause overheating of the compressor motor windings, resulting in compressor cycling on thermal overload, or the compressor may fail to start. Inadequate line wire size, and overloaded lines, are common reasons for low voltage at the product.

### To Flush The System

#### CAUTION

Use extreme care when using Dry Nitrogen to flush systems. Pressure in nitrogen cylinder could be as high as 2000 psi. Nitrogen cylinder must be equipped with approved pressure regulator and pressure relief valve. Ensure that your hoses have adequate ratings for pressure involved and that all of your equipment is in good condition. The end of the flushing hose on this tank regulator must be equipped with a hand shut-off valve (Robinair No. 40380). Close hand shut-off valve and adjust nitrogen regulator to correct pressure before proceeding with flushing procedure.

#### To Use Dry Nitrogen To Flush The System:

1. Remove compressor and filter-drier. Connect process coupling to outlet tube of condenser.
2. Fasten cloth over other end of coil to prevent old oil from spraying over room.
3. Connect hand shut-off valve on flushing hose to process coupling.
4. Slowly open hand shut-off valve and allow nitrogen to flow through condenser until discharge is clear.

#### CAUTION

**DO NOT exceed 300 Psi.**

5. Disconnect cap tube from evaporator. Flush evaporator in same manner as condenser.

#### CAUTION

**DO NOT exceed 150 Psi.**

6. Flush cap tube. This is only possible if you have proper service valve adapter.

#### CAUTION

**DO NOT exceed 300 Psi.**

7. Reassemble system.

### To Use Refrigerant To Flush The System:

#### CAUTION

Refrigerant used for flushing must be recovered into a recovery system. Meter amount of refrigerant used for flushing with your charging cylinder. **DO NOT OVERFILL THE CYLINDER.**

1. Disconnect suction and discharge lines from the compressor and remove filter-drier. Connect process coupling to outlet and inlet tube of condenser.
2. Connect hose to outlet process coupling and charging cylinder. Connect another hose to inlet coupling and recovery system.
3. Open charging cylinder and allow refrigerant to flow through condenser until discharge into bag is clear.

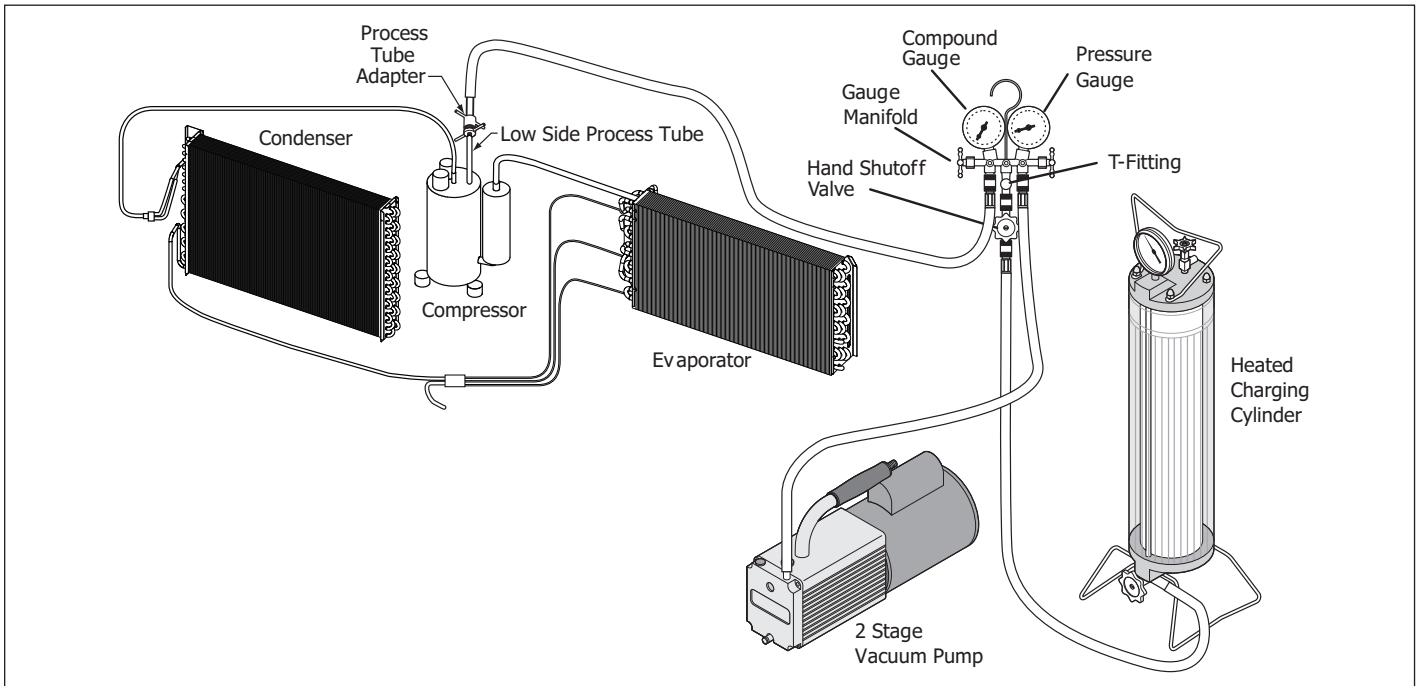
#### NOTE

The line piercing valve (clamp-on type) should be used for test purposes only. It must be removed from system after it has served its purpose.

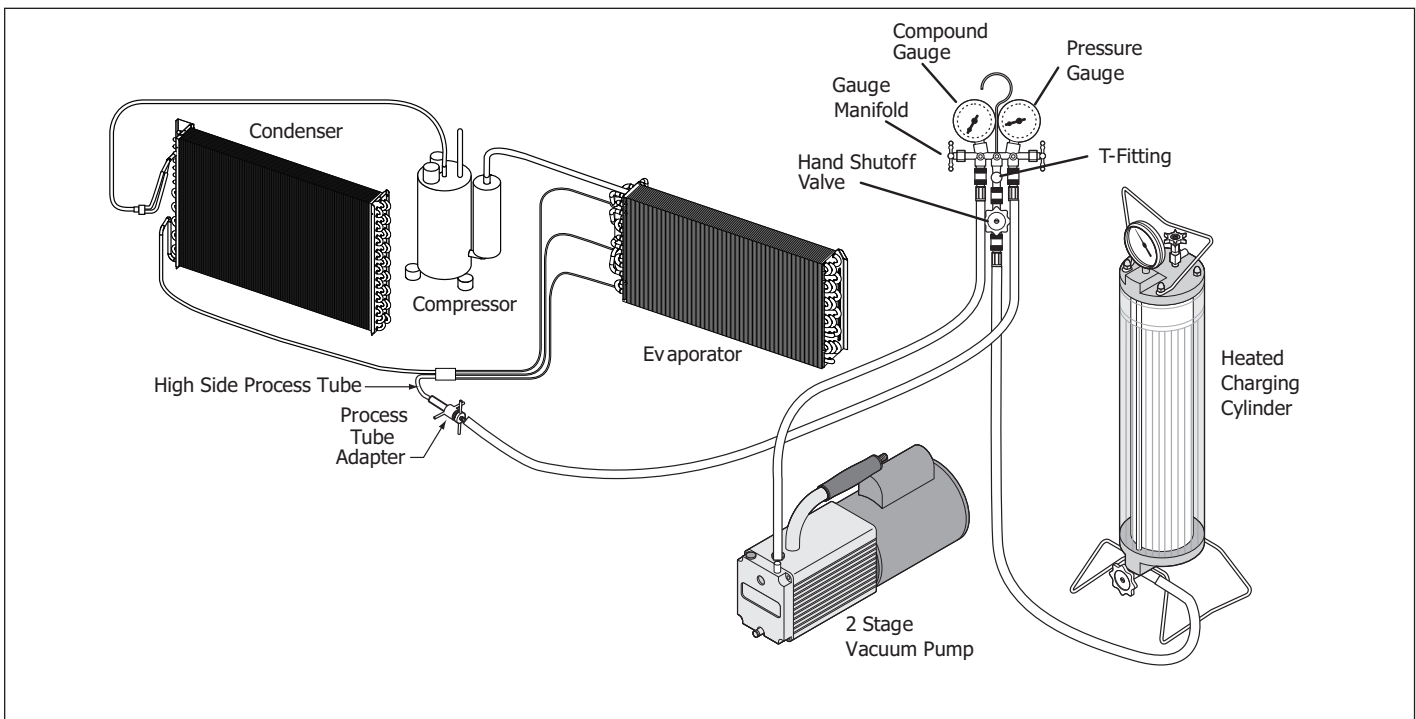
4. Disconnect capillary tube from evaporator. Flush evaporator in same manner as condenser.
5. Flush cap tube. This is only possible if you have proper service valve adapter.
6. Reassemble system.



## Section 6 Sealed System



**Figure 6-4. Installation of Evacuation and Recharging Equipment For Reciprocating Compressor**



**Figure 6-5. Installation of Evacuation and Recharging Equipment For Reciprocating Compressor**

### Equipment Needed for Evacuation & Recharging:

- Heated Dial-A-Charge charging cylinder
- Standard 3-port manifold gauge set
- Pinch-off tool capable of making leak proof seal
- Process tube adapter kit (Robinair No.12458)
- Two stage vacuum pump
- Leak detector
- Hand shut-off valve (Robinair No.40380)
- Tubing cutter
- Pinch-off tool capable of making leak proof seal
- Complete brazing torch set
- Grit cloth or Scotch-Brite
- 45% silver solder and flux



### Installing Evacuation and Recharging Equipment For Reciprocating Compressors

1. Disconnect electrical supply to unit.
2. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
3. If compressor was replaced, install correct sized process tube adapter on process tube.  
If compressor was not replaced, cut process tube with tubing cutter, leaving as much tube as possible, but removing the line tap valve installed to remove the refrigerant. Install the correct sized process tube adapter.
4. Attach refrigeration service gauge manifold to system in following order:
  - a. Low-side (compound gauge) hose to suction side process tube adapter.
  - b. High-side (pressure gauge) hose to vacuum pump.
  - c. Center port manifold hose after hand shut-off valve to charging cylinder.

### Installing Evacuation and Recharging Equipment For Rotary Compressors

1. Disconnect electrical supply to unit.
2. Attach an approved self tapping line tap valve to the process tube. Connect refrigerant recovery system to tap valve. Turn on recovery system, open the line tap valve, and allow refrigerant to flow into an approved tank.
3. If compressor was replaced, install correct sized process tube adapter on process tube.  
If compressor was not replaced, cut process tube with tubing cutter, leaving as much tube as possible, but removing the line tap valve installed to remove the refrigerant. Install the correct sized process tube adapter.
4. Attach refrigeration service gauge manifold to system in following order:
  - a. Low-side (compound gauge) hose to high side process tube adapter.
  - b. High-side (pressure gauge) hose to vacuum pump.
  - c. Center port manifold hose after hand shut-off valve to charging cylinder.



### CAUTION

**If high vacuum equipment is used, just crack both manifold valves for a few minutes and then open slowly for the two full turns counterclockwise. This will prevent the compressor oil from foaming and being drawn into the vacuum pump.**

### Evacuating System

To achieve the required levels of evacuation, a properly maintained two stage vacuum pump in good condition is required. It is absolutely essential to maintain your vacuum pump according to the manufacturer's instructions including required oil changes at the recommended intervals. Vacuum pump oil should always be changed after evacuating a contaminated system. Vacuum pump performance should be checked periodically with a micron gauge.

1. Make certain that charging cylinder valve, hand shut-off valve, and manifold gauge valves are closed.
2. Start vacuum pump.
3. Open hand shut-off valve and slowly open both manifold valves, turning counterclockwise, for two full rotations.
4. Operate vacuum pump for a minimum of 30 minutes to a minimum of 29.9" (500 micron) vacuum.
5. Close hand shut-off valve to vacuum pump. Watch compound gauge for several minutes. If reading rises, there is a leak in the system, go to step 6. If no leak is indicated, stop vacuum pump. System is now ready for charging.
6. If a leak is indicated, stop vacuum pump and introduce a small charge of refrigerant into system by cracking valve on bottom of charging cylinder until system is pressurized to 40 or 50 lbs psi.
7. Leak test low-side. Close compound gauge. Run compressor for a few minutes and leak test high-side. When leak is found, recapture refrigerant using EPA approved recovery system. Repair and go back to step 1.

## Section 6 Sealed System

### Charging The System

#### CAUTION

**Check the serial plate for the correct refrigerant type. It is extremely important to verify the type of refrigerant in the system before starting any sealed system repairs. If a filter-drier has been added to the system, add .78 ounces of refrigerant to allow for the additional volume of the sealed system.**

**After charging the system with liquid be certain to wait at least 5 minutes before starting the compressor to give the refrigerant a chance to disperse throughout the system. Otherwise the compressor could be damaged by attempting to pump excessive quantities of liquid.**

#### Preparing The Charging Cylinder:

- A. Recharging refrigerant tank must have at least eight (8) ounces more refrigerant than required to recharge.
- B. Plug in cylinder heater and bring pressure up 30 pounds above gauge pressure at ambient temperature. Do not exceed maximum temperatures.

#### To Charge System:

#### WARNING

**Do not use an external heat source on cylinder or exceed maximum gauge pressure on charging cylinder.**

#### CAUTION

**Maintain, but do not exceed, this 30 pound increase in gauge pressure during system charging.**

1. Make certain that hand shut-off valve to vacuum pump is closed.
2. Close high-side manifold gauge valve.
3. Set charging cylinder scale to pressure indicated on cylinder pressure gauge.

4. Observe refrigerant level in sight glass. Subtract amount to be charged into system and note shut off point.
5. Open charging cylinder valve slowly and allow proper charge to enter system.
6. As soon as refrigerant in sight glass has gone down to predetermined level, close charging cylinder valve.

#### WARNING

**Disconnect the charging cylinder heater at this time to prevent the cylinder pressure from exceeding its maximum limits.**

7. Allow system to sit for five minutes.
8. Turn on AC unit to its highest (coldest) setting. Run unit for a few minutes and monitor system pressures.
9. When satisfied that the unit is operating correctly, clamp the high-side process tube with the pinch-off tool while the unit is still running. Remove line tap valve. Solder process tube closed.
10. Turn off AC unit. After a few minutes check process tube for leaks.

### Vacuum Pump Maintenance

It is absolutely essential to maintain your vacuum pump according to the manufacturer's instructions, including required oil changes at the recommended intervals. Vacuum pump oil should always be changed after evacuating a contaminated system. Vacuum pump performance should be checked periodically with a micron gauge.

Vacuum pump suppliers may or may not recommend changing the vacuum pump oil to the same type that's in the system being evacuated. Some manufacturers may recommend a vacuum pump that's dedicated to R-22 systems.

Robinair has stated that their current and discontinued vacuum pump models, using mineral oil currently specified for use in their vacuum pumps, can be used to evacuate R-22 systems.

For other brands of vacuum pumps, check with the manufacturer for restrictions and guidelines when using with R-22.

#### CAUTION

**If you use a vacuum pump with mineral oil to evacuate an R-22 system, it is ABSOLUTELY ESSENTIAL to have a shut-off valve between pump and your manifold gauge set. The hand valve must be closed during all times when vacuum pump is not operating. This will prevent migration of mineral oil vapor into R-22 oil systems. If the vacuum pump should stop during evacuation for any reason, the hand pump shut-off valve must be closed immediately.**

VACUUM CHART		
Vacuum Inches Hg.	Microns	Boiling Point of Water °F
28.940	25000	77.9
29.530	10000	52.0
29.832	4600	32.0
29.882	1000	1.0
29.901	500	-11.2
29.915	150	-32.8
29.917	100	-38.2
29.919	50	-49.0

To achieve the required 29.9 inch (500 micron) vacuum, a properly maintained two-stage vacuum pump in good condition is required. A two stage pump can reach a deeper vacuum than a single stage because the exhaust from the first pumping stage is discharged into the second pumping stage. This means the second stage begins pumping at a lower pressure so a lower ultimate vacuum can be achieved.

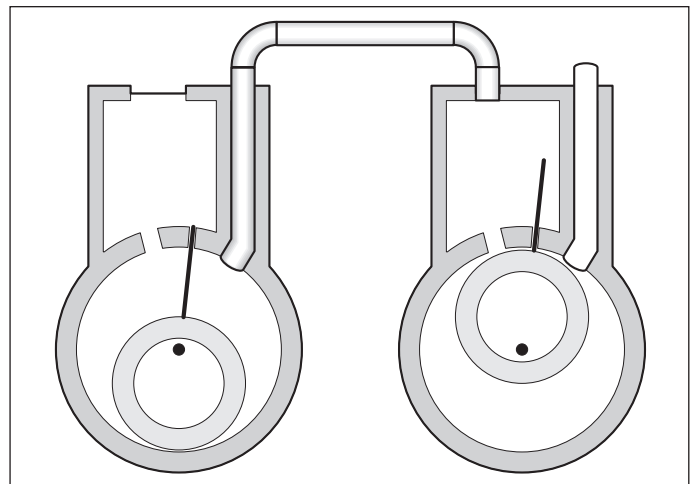


Figure 6-6. Two Stage Vacuum Pump

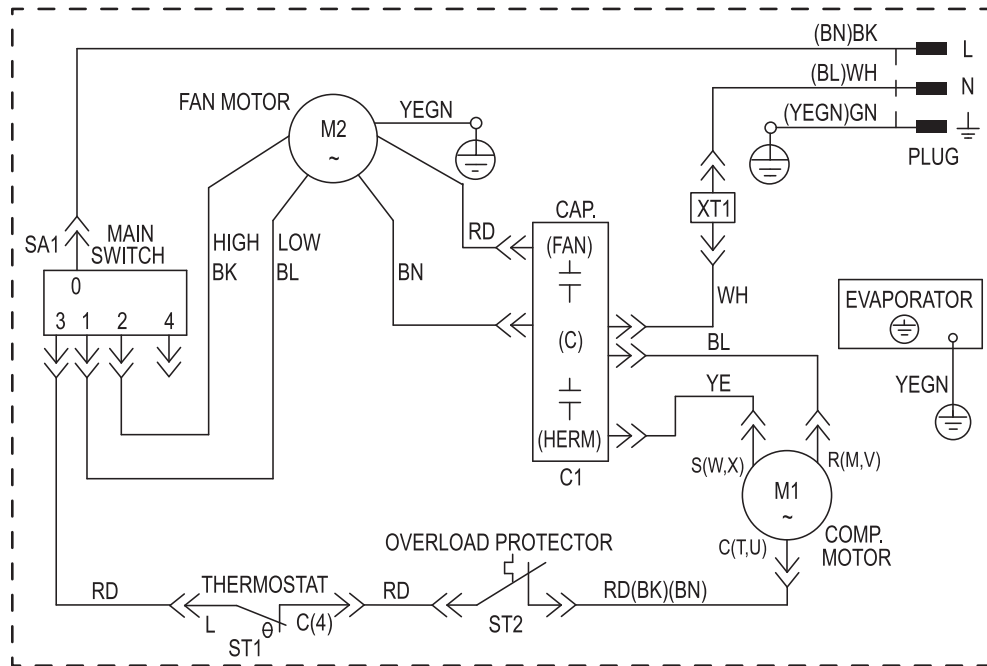
## Section 6 Sealed System

## Notes

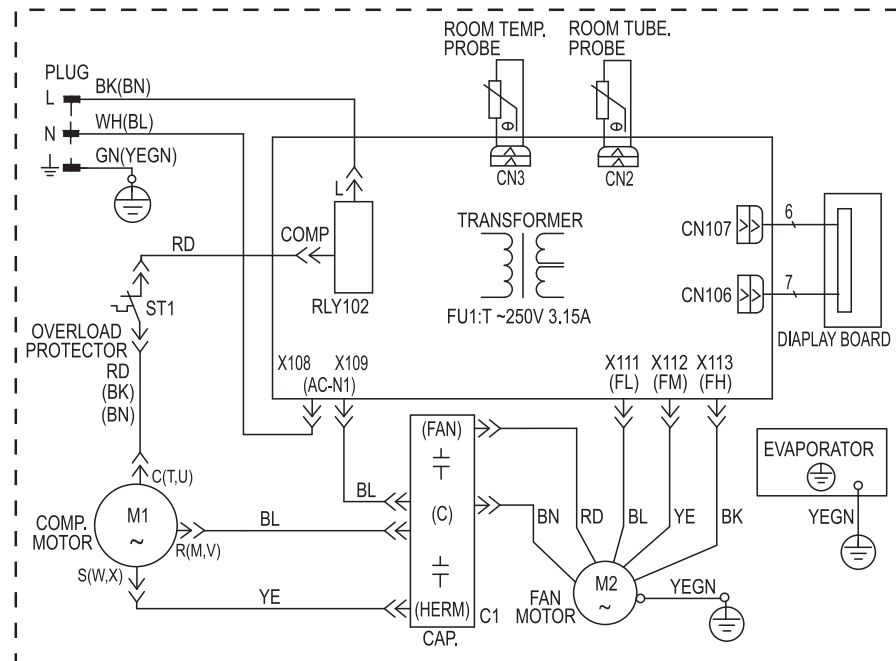
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## Section 7 Wiring Diagrams

### Mini Air Conditioner Models FAX052P7A & FAX054P7A Wire Diagram



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## Section 7 Wiring Diagrams

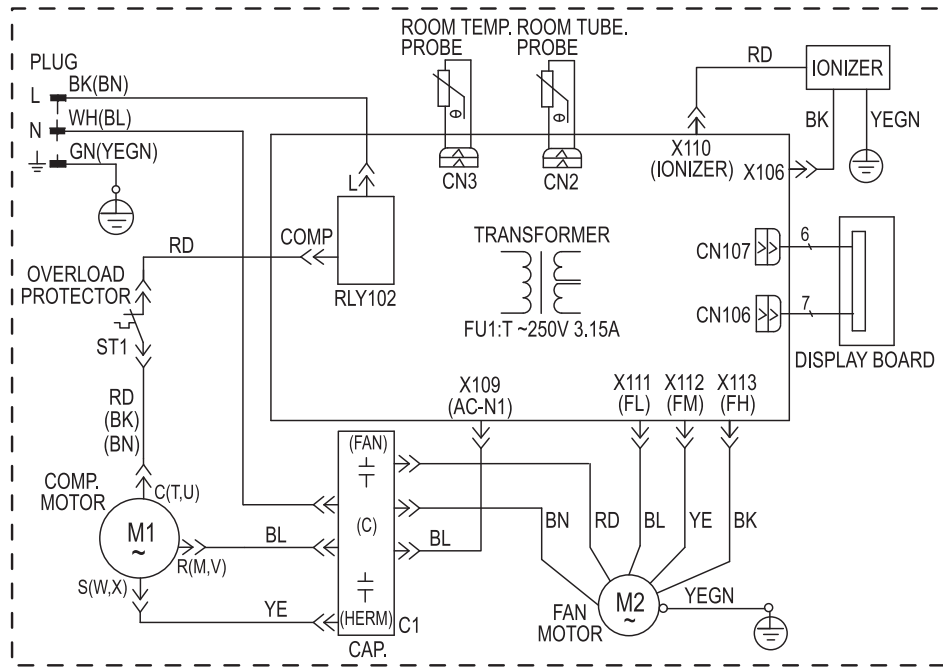
### Mini Compact Air Conditioner Models

**FAA055P7A, FAA062P7A, FAA065P7A, FAA082P7A, FAA084P7A & FAA086P7A**

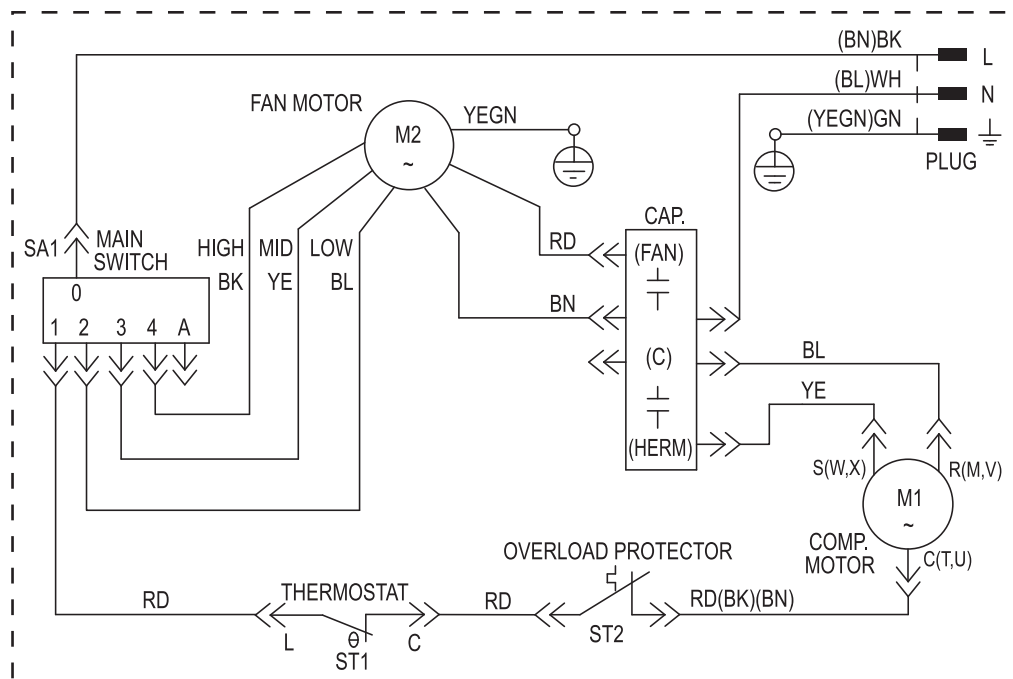
### Compact Air Conditioner Models

**FAC102P1A, FAC105P1A, FAC106P1A, FAC122P1A, FAC125P1A & FAC126P1A**

### Wire Diagram



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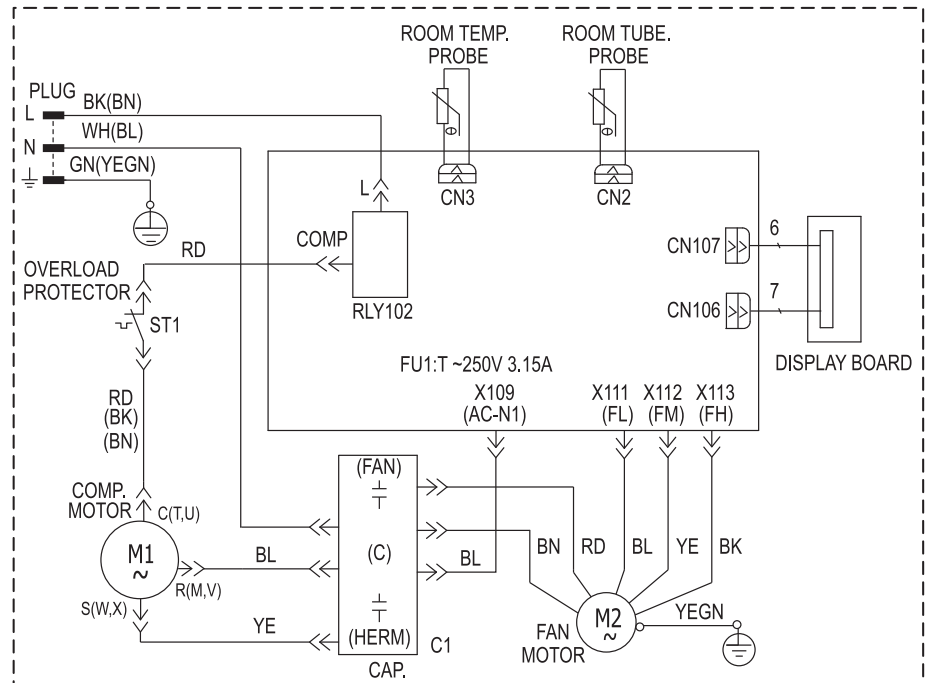
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## Compact Air Conditioner Models

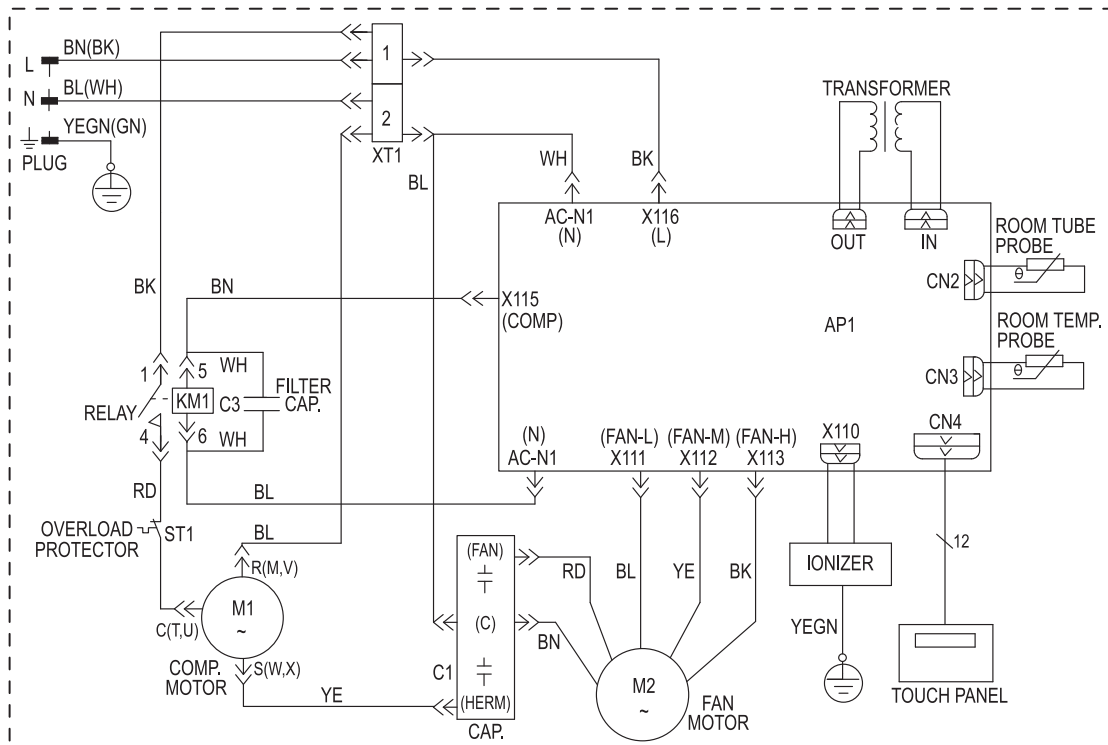
**FAC104P1A, FAC107P1A, FAC124P1A & FAC127P1A**

## Median Air Conditioner Models

**FAM156R1A & FAM186R2A-1 Wire Diagram**



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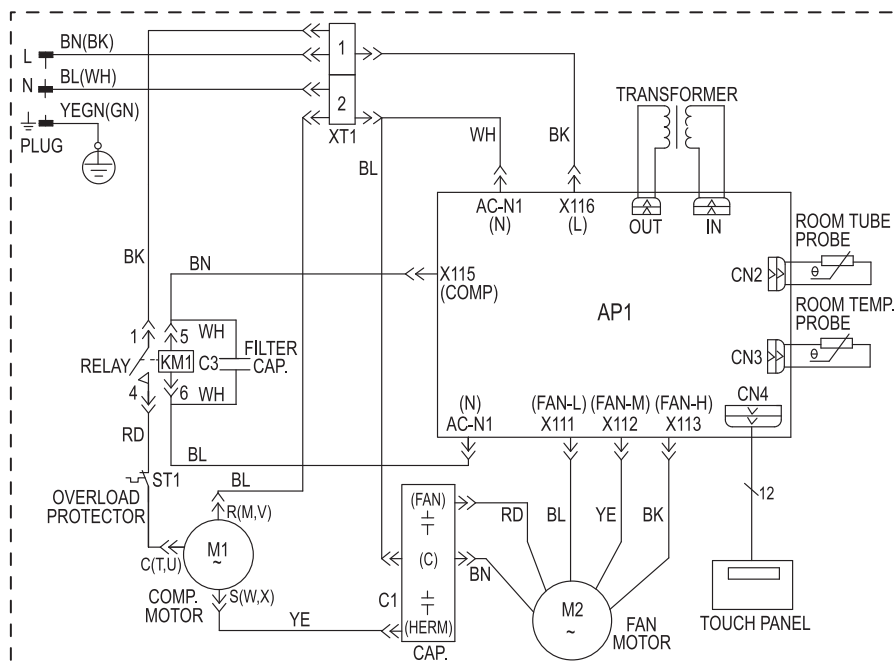


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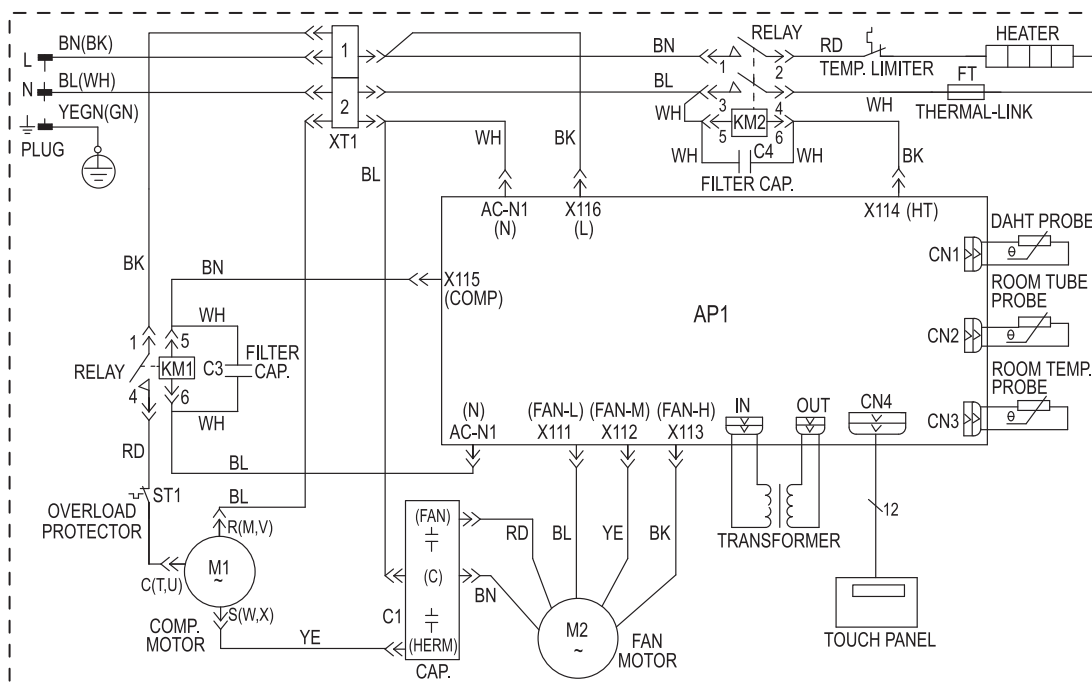


## Section 7 Wiring Diagrams

### Median Air Conditioner Models FAM157R1A & FAM187R2A-1 Wire Diagram

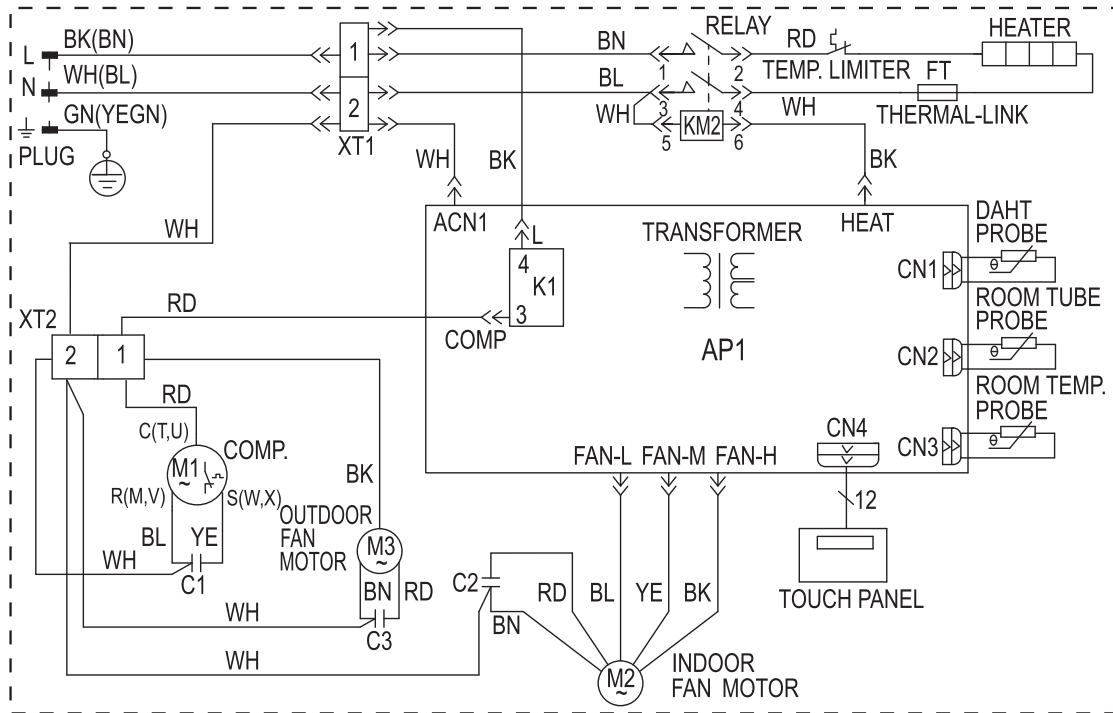


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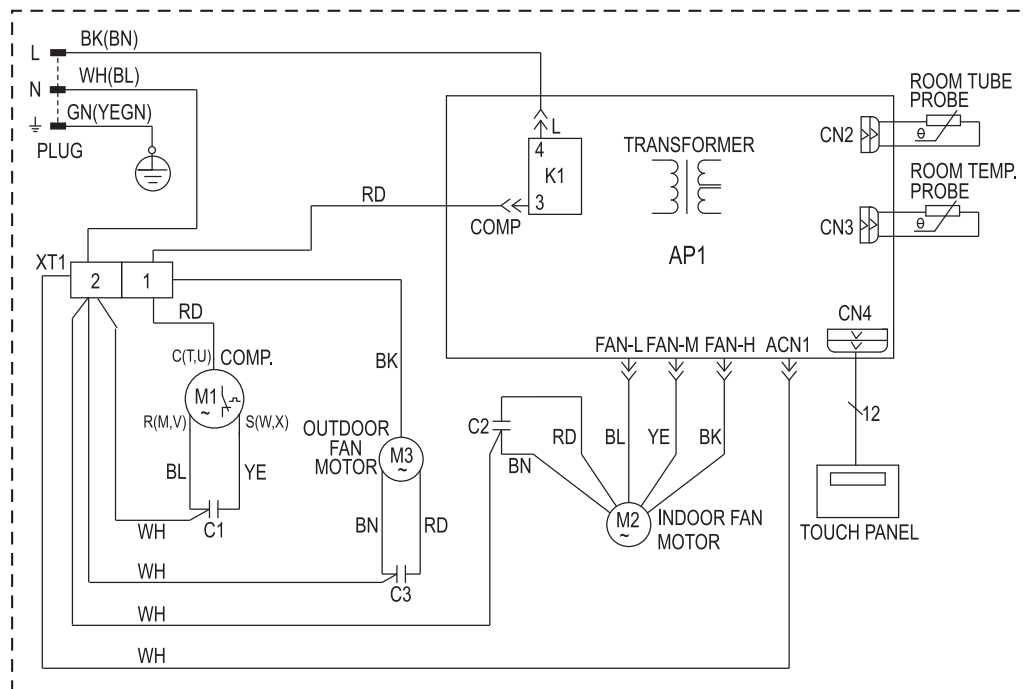


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## Median Air Conditioner Models FAM18ER2A-1 Wire Diagram



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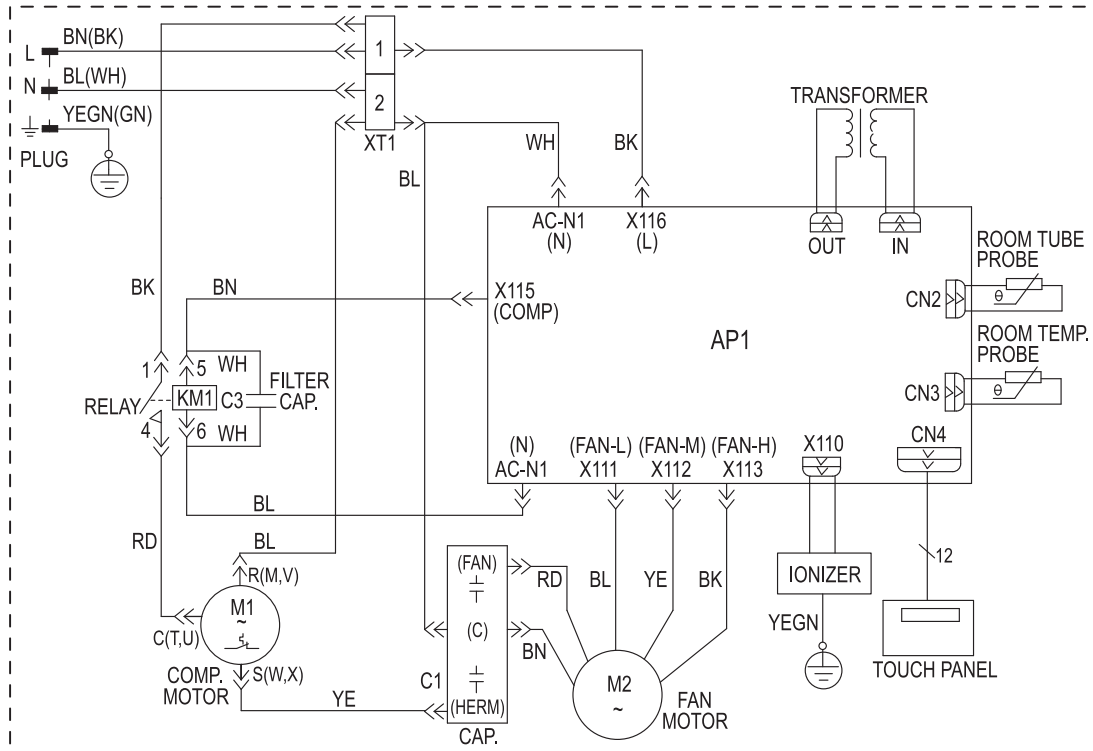


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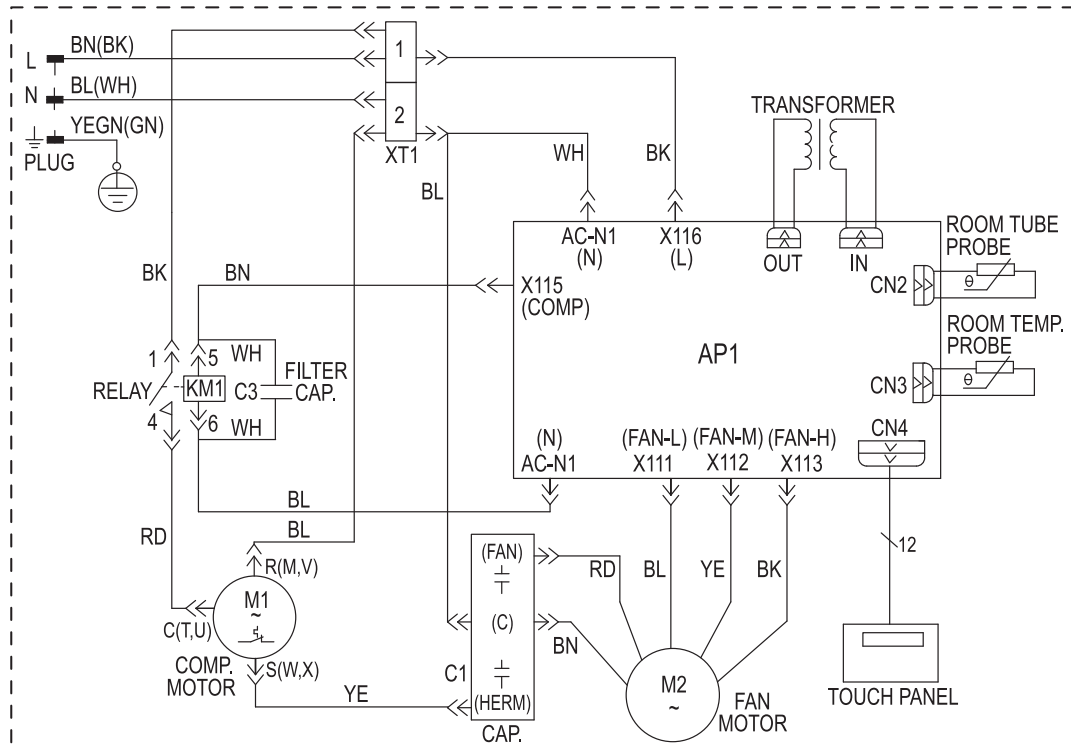
## Section 7 Wiring Diagrams

### Heavy Duty Air Conditioner Models

#### FAS226R2A, FAS256R2A, FAS257R2A, FAS296R2A & FAS297R2A Wire Diagram

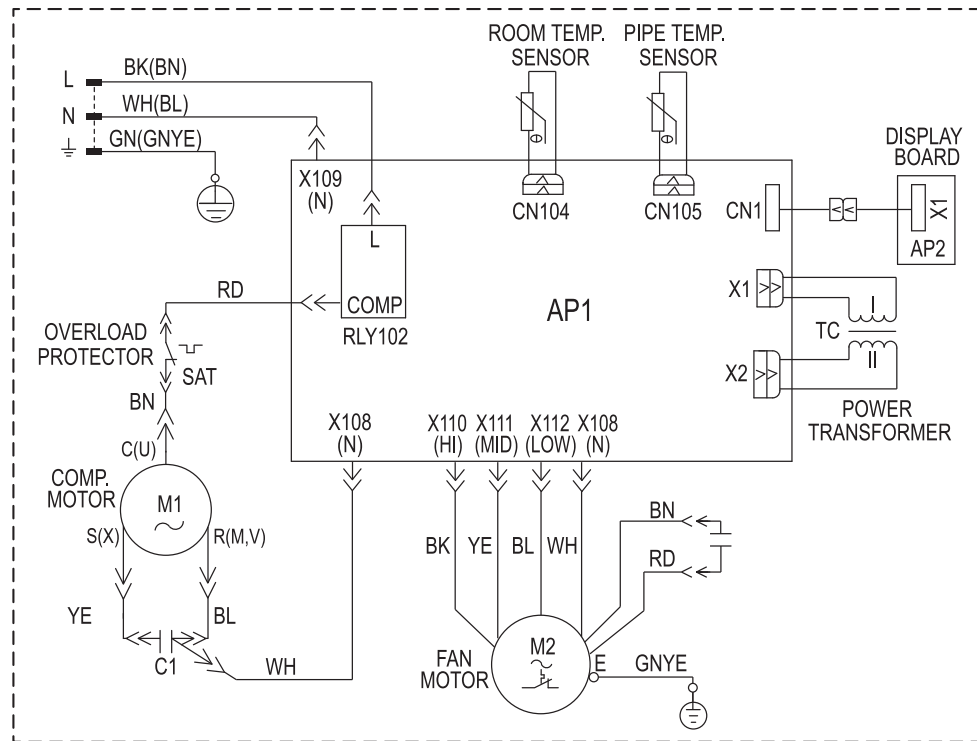


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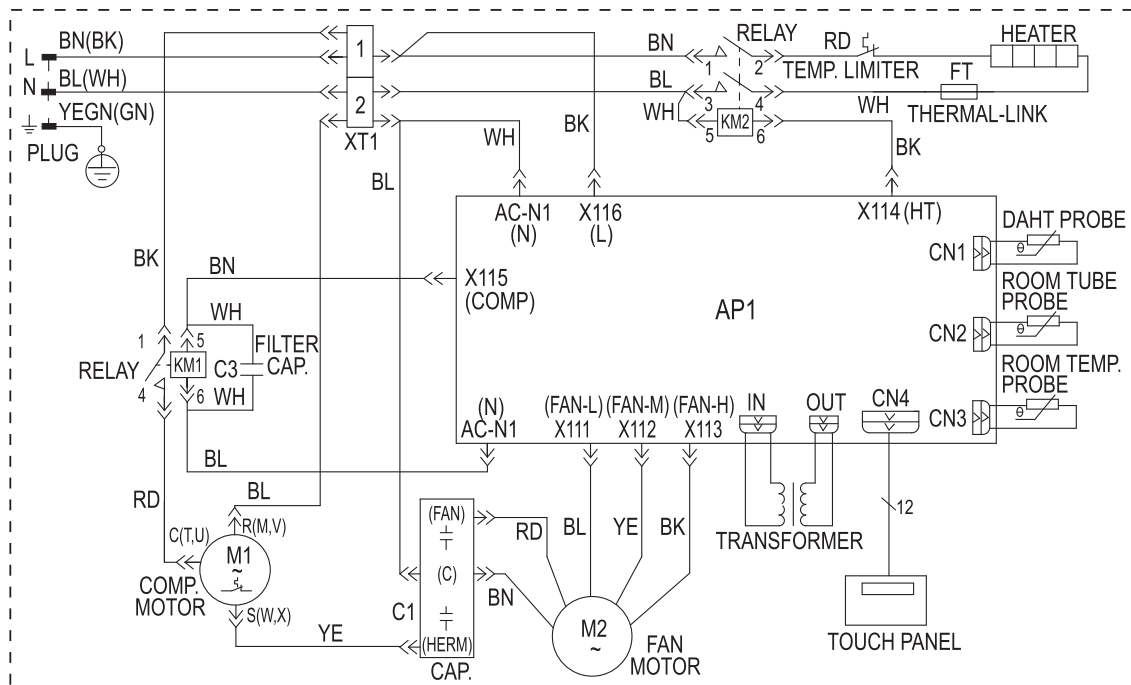


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## Heavy Duty Air Conditioner Models FAS25ER2A Wire Diagram

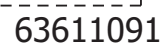


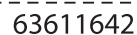
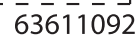
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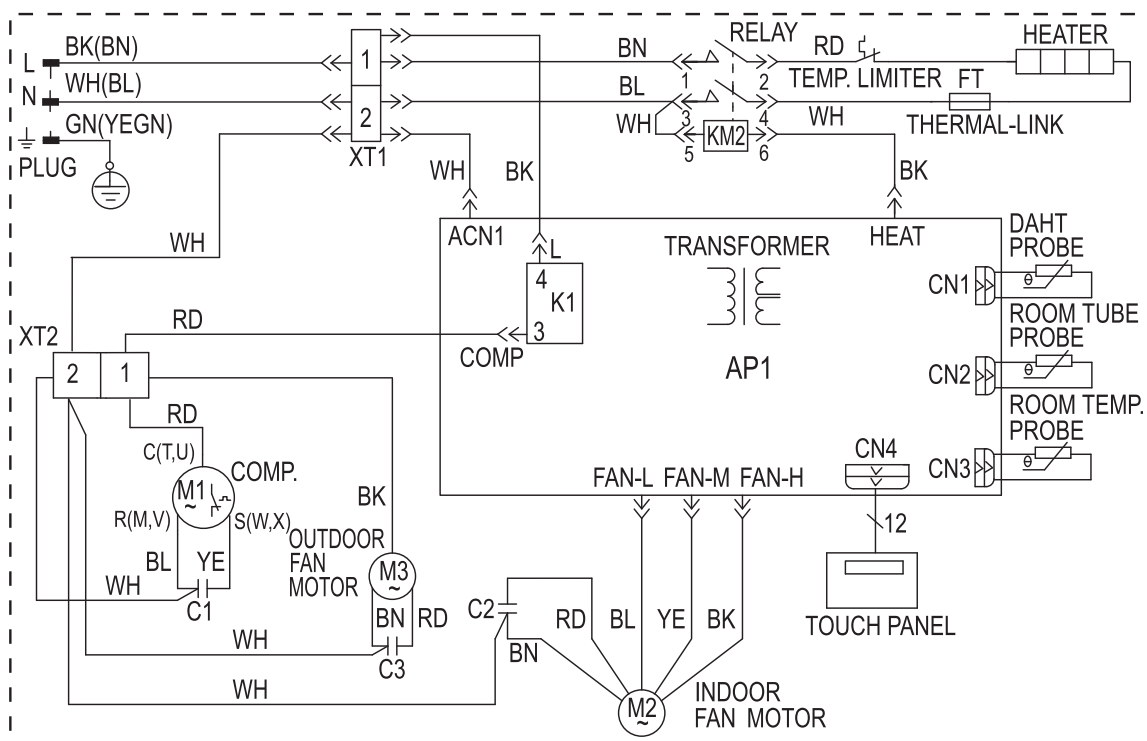
## Through The Wall Air Conditioners Models FAH086R1T, FAH106R1T, FAH106R2T & FAH126R2T Wire Diagram



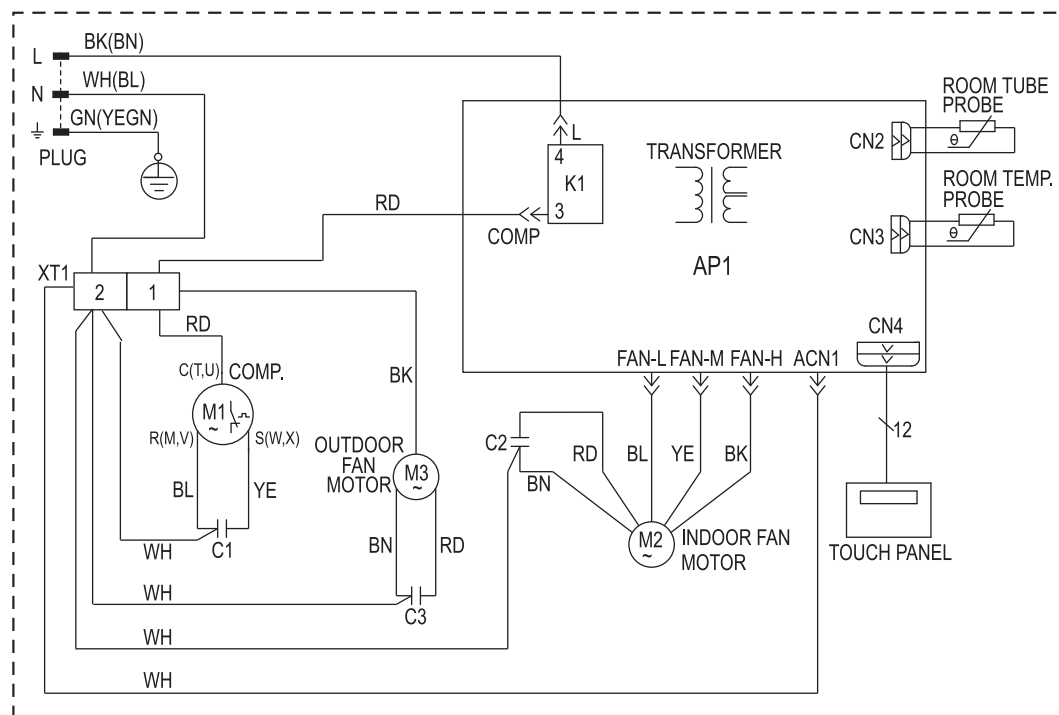


## Section 7 Wiring Diagrams

### Through The Wall Air Conditioners Models FAH146R2T & FAH14ER2T Wire Diagram



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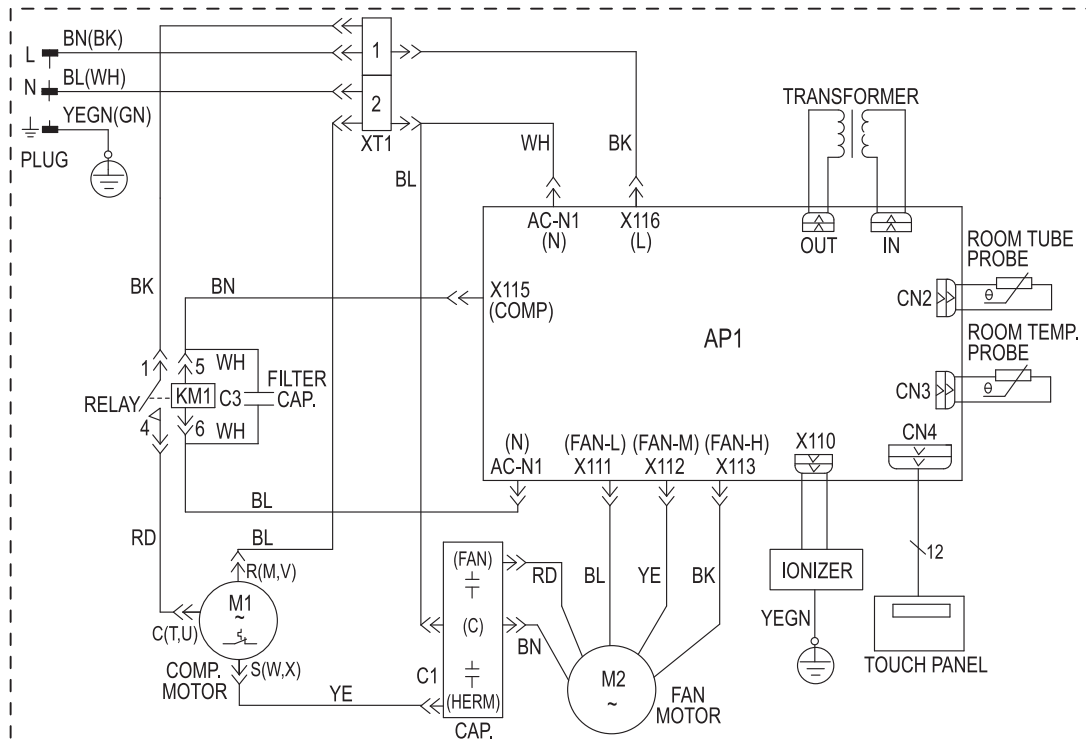


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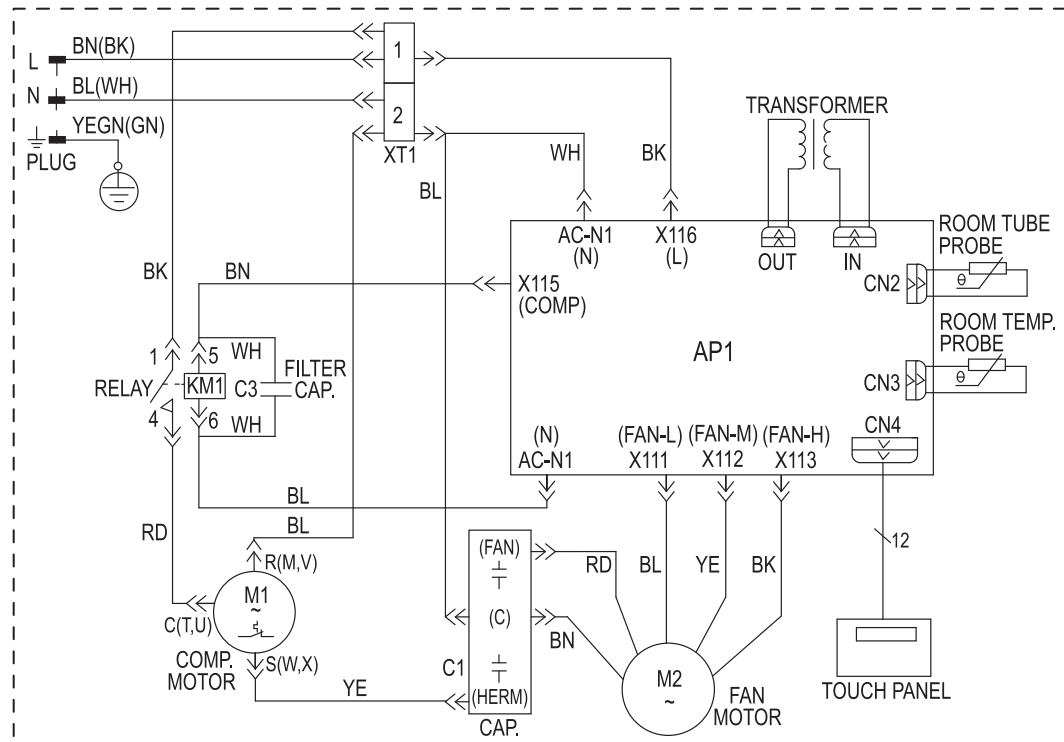


## Slider/Casement Air Conditioners Models

### FAK085R7V, FAK104R1V, FAK105R7V & FAK124R1V Wire Diagram



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## Section 7 Wiring Diagrams

## Notes

This image shows a full page of blank, lined paper. It features approximately 20 evenly spaced horizontal grey lines across its entire width, providing a template for writing or drawing. The margins are consistent on all sides.